

Sandra Itzel García Sánchez

Mapping sustainability in the hydrocarbons industry: Analysis of Statoil's experience from 2001 to 2015

Master's thesis in Globalization and Sustainable Development

Supervisor: Espen Storli

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Norwegian University of Science and Technology
Faculty of Humanities
Department of Historical Studies



ABSTRACT

Historians have analyzed the linkages between hydrocarbons corporations and sustainability. Some of them argue that oil and gas operations destroy ecosystems while others claim that businesses can improve financial development, job creation, and social investments. The year 1987 define a dividing line into the global perceptions of sustainable development, while the new millennium brought a transformation into the reporting of sustainability by oil and gas industries.

The historical and qualitative methodology implemented was chosen to address the main research question of ¿How did Statoil embrace sustainability into its guidelines, operations, and reporting system from 2001 to 2015? Two methodologies were used, first the construction of a historical case of study based on the Statoil's annual and sustainability reports evolution from 2001 to 2015. The second and core method used was an adaptation of the Global Compact Self-Assessment Tool (GCSAT) of the United Nations Global Compact "UNGC" into a historical matrix and mapping of sustainability, which allowed the analysis of the reports in comparison with the economic, social, political and environmental pillars of the sustainable development but also the response of the company to sustainability benchmarks such as Global Reporting Initiative "GRI", Carbon Disclosure Project "CDP" and the 10 principles of the UNGC.

The analysis results reveal that external historical factors such as the oil crisis of 2004, the entered into force of the Kyoto Protocol in 2005, the economic crisis of 2008, the implementation of the Paris Agreement in 2015 and terrorist attacks, transformed the Statoil's sustainability reporting system and guidelines as much as the structural changes after the merger with Hydro in 2007 and the separation of Statoil fuel & Retail in 2010 did. While on the other hand the biggest sustainability challenges were experienced in terms of corruption, Green House Gas emissions, and harmful chemical discharges. However, the company found a way to ensure its sustainability through human capital investments, technological improvements, renewable energy, low carbon policies, key business, and partnerships.

Key Words: Sustainability, Kyoto Protocol, Statoil, Sustainable Development, Oil and Gas, UNGC, GRI, CDP, CSR, Sustainable Development Goals, Millennium Development Goals

PREFACE

I offer special thanks for the CONACYT “ Mexican Council for Science and Technology” and BANOBRAS “ National Bank of Infrastructure and Public Services S.N.C “ of the Mexican government, those institutes funded my whole Master's education through the Energy-Hydrocarbons Sector Fellowship and made the realization of this thesis possible.

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I would like to offer my gratitude to my mom that support me during all my studies, and believed on me to inspired me to become a researcher.

Finally, I want to dedicate this thesis to my father, who helped me along with my professional carrier until the last moments of his life and open me the doors for my professional development in Norway.

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LIST OF ABBREVIATIONS

AGECC	Advisory Group on Energy and climate change
AMOU	Annual Working Environmental and Organization Survey
ANSI	American National Standards Institute
ANTHEI	Angola Norway Tanzania Higher Education Initiative
B&G	Bertelsen & Garpestad AS
bbbl	Barrel
BLIHR	Business Leader’s Initiative on Human Rights
B-PMR	The business Partnership for Market Readiness
BTC	The Baku-Tbilisi-Ceyhan oil pipeline
CCAC	The climate and Clean Air Coalition
CCS	Carbon Capture and Storage
CDCF	Community Development Carbon Fund
CDM	The United Nations Clean Development Mechanism
CDP	Carbon Disclosure Project
CEO	Chief Executive Officer
CHP	Combined Heat and Power
CO₂	Carbon Dioxide
COSO	Committee of Sponsoring Organization of the Treadway Commission
CR	Corporate Responsibility
CSLF	US Carbon Sequestration Leadership Forum
DJ Index	Dow Jones Index
EIF	Environmental Impact Factor
EITI	Extractive Industries Transparency Initiatives
EN	Abbreviation to describe Environmental standards in UNGC Self-Assessment tool and GRI
EPN	Exploration & Production Norway
EPRA	Early-phase Risk Assessment
ESIA	Environmental and Social Impact Analysis
FIRST	For Inspiration and Recognition of Science and Technology
FTSE4Good	Financial Times Stock Exchange 4 Good Index

GCSAT	Global Compact Self-Assessment Tool
GE	General Electric
GEMI	Global Environmental Management Initiative
GGFR	Global Gas Flaring Reduction
GHG	Green House Gas emissions
GRI	Global Reporting Initiative
HCD	Harmful Chemical Discharges
HR	Abbreviation to describe Human Rights standards in UNGC Self-Assessment tool and GRI
HRRAs	Human Rights Risk Assessment
HSE	Health, Safety and the Environment
IAIA	Association for Impact Assessment
IASB	International Accounting Standards Board
ICEM	International Federation of Chemical, Energy, Mine and General Worker’s Unions
ICG	International Crisis Group
IDD	Integrity Due to Diligence
IEA	International Energy Agency
IETA	International Emissions Trading Association
IFC	International Finance Corporation
IFRS	International Financial Reporting Standards
IGU	International Gas Union
ILO	International Labour Organization
IPIECA	International Petroleum Industry Environmental Conservation Association
IPPC	International Panel on Climate Change
ISAE 3000	International Standard for Assurance Engagements, standard 3000
ISO 14001	International Organization for Standardization, standard 14001
ISO 9001	International Organization for Standardization, standard 9001
IUCN	International Conservation Union
LA	Abbreviation to describe Labour standards in UNGC Self-Assessment tool and GRI
LEAP	Learn, Engage, Achieve, Perform
LOC	Local Opportunity Centre
LPG	Liquefied Petroleum Gas

MDG's	Millennium Development Goals
NAOSC	North American Oil Sands Corporation
NCS	Norwegian Continental Shelf
NGPF	Norwegian Government Pension Fund
NOC	National Oil Company
NRC	Norwegian Refugee Council
OECD	The Organization for Economic Cooperation and Development
OGMP	Oil and Gas Methane Partnership
OGP	Oil and Gas Producers Association
PACI	the Partnering Against Corruption Initiative
PCF	Prototype Carbon Fund
PCS	Social Communication Project
PEA	Environmental Education Programme
PEMEX	Petroleos Mexicanos
RWE	Rheinisch-Westfälisches Elektrizitätswerk
SDFI	State's Direct Financial Interest
SDG's	Sustainable Development Goals
SFR	Statoil Fuel & Retail
SNF	Sami Natural Resources Association
SSE	Scottish and Southern Energy
TANSEA	Tanzania Sensitivity Atlas
UNDP	United Nations Development Program
UNEP	United Nations Environment Program
UNGC	United Nations Global Compact
UNHCR	United Nations High Commissioner for Refugees
VPSHR	Voluntary Principles on Security and Human Rights
WB	World Bank
WBCSD	World Business Council for Sustainable Development

CHAPTER 1: THESIS INTRODUCTION

1.1 INTRODUCTION

This research provides a historical perspective of Statoil's development on sustainability. The question of how oil and gas industries can drive sustainability has been discussed by many historians and transformed in parallel to the global regulations and sustainability reporting benchmarks evolved. Ann- Kristin Bergquist argues that industries have been the key to global economic expansion but also environmental crisis since their settle during the industrial revolution (Bergquist, 2017 p. 2). Hydrocarbons companies have not been excluded to this trend, in one way they can drive financial growth and development, generate social positive spin-offs, technology, and new employments; while on the other hand, their business expansion also produces pollution, ecosystem degradation and increase the breach between social classes (Bergquist, 2017 pp. 2-3)(Chandler, Amatori, & Hiokono, 1997 cited by Bergquist, 2017) (Koolwal & Khandelwal, 2019).

However, how sustainability can be linked to the oil industries? Well, the answer is through guidelines and policies than embrace sustainable development into its business and operations, without put on risk its welfare (International Labour Organization, 2007 p.77). For Koolwal & Khandelwal corporate social responsibility and health and safety are the most important. While for the United Nations Global Compact "UNGC" a sustainable company compromises its operations to ensure human and labor rights, anti-corruption and environmental protection (United Nations Global Compact, 2020c).

The United Nations Educational, Scientific and Cultural Organization "UNESCO" specifies the differences between sustainable development and sustainability, in one way, sustainable development born during the World Commission on Environment and Development (WCED) 1987 and was defined as "The development that meets the needs of the present without compromising the ability of future generations to meet their own needs", this concept involve an equilibrium between economic, social and environmental aspects supported by governance and cultural directions, while sustainability is recognized as the goal to achieve (UNESCO, 2020) (United Nations, 1987 p. 15). On the other hand, the implementation of the United Nations and international agreements has transformed sustainability reporting in response to global requirements. For example, the Kyoto Protocol on 1997 settle emission targets of the major greenhouse gases: Carbon dioxide, Methane, Nitrous oxide, Hydrofluorocarbons, Perfluorocarbons, and Sulphur hexafluoride that industrialized sectors such as energy industries, has the obligation to adapt their operations and emissions to mitigate the climate change effect of those gasses (UNFCCC, 2020a) (UNFCCC, 1997 p. 2-20).

Without a doubt, the declaration of the Kyoto Protocol in 1997 and the United Nations Millennium Declaration of 2000 defined a historical division line of the global standards of sustainable development that influenced the introduction of sustainability into the operations and guidelines of the hydrocarbons corporations. While the substitution of the United Nations Millennium Declaration 2000 for the Agenda 2030 and the implementation Paris Agreement of 2015, revolutionized the conceptualization of sustainability and strongly reoriented the policies and practices of oil and gas industries to the mitigation of climate change through the implementation of global partnerships, economic growth, education, gender equality, more affordable energy, environmental protection, peace, and eradication of poverty (UNFCCC, 2020b) (United Nations, 2000)(UNDP, 2015) (United Nations, 2015a)(United Nations, 2015c)(United Nations, 2017).

On the other hand , enterprises have adapted their sustainability reporting systems due to internal structural company changes but also due to operational meta-level policies spheres (International Labour Organization, 2007p. 6). The history of Statoil's sustainability reporting during the period 2001 to 2015, has been influenced in all of those levels, since the first conceptualization of sustainability in their annual reports in 1999 and the implementation of the first sustainability report in 2001 to the merge with Norsk Hydro in October 2007 that allowed the company to settle operations in 82% of the Norwegian Continental Shelf "NCS" and became the most influential oil and gas company of Norway (Statoil, 1999 pp. 38, 41)(Statoil, 2001b p. 9)(Institutt for arkeologi, konservering og historie, 2016 p. 12). But also by external factors that have challenged the sustainability of the enterprise such as terrorist attacks, technical problems in their facilities, the oil crisis of 2004, the entered into force of the Kyoto Protocol in 2005 the global economic crisis of 2008 and the implementation of the Paris Agreement in 2015.

The purpose of this study is answer the research question of *How did Statoil embrace sustainability into its guidelines, operations and reporting system from 2001 to 2015?*, and to address that, this historical analysis was structured in seven chapters. Chapters one and two describe the introduction, purpose of the topic, and methodology. Chapter 3 provides with a background of the evolution of sustainability, sustainable development and how the oil and gas industries embraced those concepts. While chapters four, five and six analyze and discuss the reporting of Statoil in terms of economical, socio-political, and environmental factors. Then, chapter seven concludes the historical case explaining how those factors were correlated between each other during history and influenced the guidelines and policies of Statoil's sustainability.

1.2 PURPOSE OF THE STUDY AND RESEARCH QUESTIONS

The aim of this research is to formulate a historical analysis of how the Statoil's sustainability and annual reports evolved and inserted the sustainable development pillars into their guidelines and sustainability reporting system from 2001 to 2015. The thesis also examines from micro, macro, and meta-perspective how external global factors and internal structural changes such as the merger with Hydro in 2007 and the separation of Statoil Fuel & Retail in 2010 transformed the sustainability priorities and guidelines of the company. All of those from a whole perspective that includes sustainability benchmarks such as United Nations Global Compact "UNGC", Global Reporting Initiative "GRI", Carbon Disclosure Project "CDP". Then a theoretical comparison in agreement with the economic, social, political and environmental pillars of the sustainable development.

The main research question of this thesis is *How did Statoil embrace sustainability into its guidelines, operations and reporting system from 2001 to 2015?* Reflecting the theoretical considerations, the administrative changes that the enterprise experienced and the historical transformation of the sustainability reporting throughout the global concerns, the answer to this main research question depends on the answers of the three secondary research questions as follow:

- How did the annual and sustainability reports evolve through the Statoil's business and production expansion from 2001 to 2015?
- Did Statoil implement strategies of anti-corruption, corporate social responsibility, human and labor rights, partnerships, gender equality, and non-discrimination into its sustainability reports between 2001 to 2015?
- Which were the most remarkable environmental reporting changes experienced by Statoil's annual and sustainability informs between 2001 to 2015 influenced by the global regulations of the Kyoto Protocol and the Paris agreement?

This thesis analysis is relevant for historians and researchers concerned about Statoil's performance or hydrocarbons industries response to sustainable development. But also this research may be useful for stakeholders than want to evaluate the sustainability historical performance of Statoil.

CHAPTER II: THEORY AND METHOD

“If history repeats itself and the unexpected always happens, how incapable must man be of learning from experience?”

George Bernard Shaw (1856-1950)

2.1 THEORETICAL CONSIDERATIONS

The convention of the Paris Agreement signed at the UN Conference of Parties (COP21) in December 2015 encourages the global awareness of climate change recognizing the importance of economic flows, protection of biodiversity, education, public participation, promote human rights and gender equality through global cooperation as strategies to address climate change (United Nations, 2015a p. 2). As a result, many significant changes were implemented in terms of sustainable development, but specifically in terms of environmental sustainability that revolutionized the targets and management of oil and gas industries globally. Many authors and organizations have discussed sustainable development, while others have analyzed the history of Statoil from different perspectives. Nevertheless, in order to understand the factors that influenced the changes in the sustainability reporting of the Statoil’s guidelines and operations. The existing literature responds how the company includes the economic, social, political, and environmental pillars of sustainable development into its sustainability reporting system, and how those reports evolved in comparison with external benchmarks reporting systems such as Global Reporting Initiative “GRI”, United Nations Global Compact communication on progress, and Carbon Disclosure Project, from the execution of the first sustainability report in 2001 to the reports published in 2015.

Historians of economic sustainability and hydrocarbons production such as Mats Olimb and Tore Malo Ødegård have noticed that the oil prices and spare capacity of the Organization of the Petroleum Exporting Countries “OPEC” has influenced the reporting response of hydrocarbons industries during economic crisis periods, such as the oil crisis of 2004 and the economic crisis of 2008. Having impacts on the oil and gas production, revenue, and operations. While researchers such as the professors Jonathon W. Moses and Bjorn Letnes “Managing Resource abundance and wealth, the Norwegian experience”, analyzed the success oil management, into a bigger spectrum that also involves the importance of the OPEC as a regulatory organization, but includes paradox of plenty behind the oil welfare, the importance of the state regulations,

the decreased competitiveness and the importance of transparency into operations (Moses & Letnes, 2017pp. 1- 107).

In contrast, social researchers such as Nikhil Koolwal and Dr. Shilpi Khandelwal have discussed the importance of responsibility and social investments to guarantee sustainability in an oil and gas enterprise. In their report “Corporate Social Responsibility (CSR) implementation in oil & gas Industry: Challenges and Solutions” they exemplified how corruption, abuses of human and labor rights can affect the reliability and business of the company (Koolwal & Khandelwal, 2019). While the UN Global Compact, argues that a sustainable enterprise needs to report in concordance to human rights, labor standards and anti-corruption mechanism to achieve sustainability (United Nations Global Compact, 2020b).

Without a doubt, the sustainability environmental response of a hydrocarbon’s company has been a point of discussion for many researchers, specifically after the implementation of the Kyoto Protocol 2005 and the Paris Agreement of 2015 (UNFCCC, 1997) (United Nations, 2015a). In one way Jafarinejad describes that one of the main negative effects of oil production is the accidental oil spills on the ecosystem, which affect biodiversity and alternate the water sea composition (Jafarinejad, 2017). While other scientists such as Victoria Tornero and Georg Hanke argue that harmful chemical discharges of the oil industry, can generate environmental risks and serious health problems for the humans exposed (Tornero & Hanke, 2016). By contrast, the survey experiment of Tvinnereim, Lægreid, and Fløttum, debate than the environmental sustainability of an enterprise is also on risk through the public point of view and community approval, they exemplified how a single negative environmental accident can affect the reliability of the enterprise, even more than all the technological improvement to remediate them (Tvinnereim, Lægreid, & Fløttum, 2020).

To conclude these theoretic deliberations of how environmental, social, political, and economic management can drive sustainability into an oil and gas industry, it is important to argue that external and accounting benchmarks can influence the sustainability of an enterprise and its business. One of the most used indexes is the Global Reporting Initiative (GRI), which supports businesses and governments to standardize their activities in topics such as oil, gas and coal operations. Through the evaluation of environmental, economic, and social risks to support the decision making of stakeholders based on the reliability of the company (Global Reporting Initiative, 2020). While, the CDP helps enterprises, cities, and investors to orient their practices into sustainable development and specifically environmental protection and climate change mitigation (Carbon Disclosure Project, 2020). Finally, the Self- Assessment tool and 10

principles of the UNGC disclose how the enterprises report in agreement with the United Nations standards in its communication on progress (United Nations Global Compact, 2020a).

2.2 METHODOLOGY DEVELOPMENT

2.2.1 Methods , data collection and analysis procedure

The historical and qualitative methodology implemented was chosen and improved through the main research question of *¿How did Statoil embrace sustainability into its guidelines, operations and reporting system from 2001 to 2015?¿*. The study was focused on the development of the three secondary questions to analyze the guidelines, practices and policies implemented by Statoil in its annual and sustainability reports to scrutinize the internal sustainability changes that the company suffered through its history. But also analyze how external factors such as economic crisis, United Nations regulations, political changes in host countries and environmental regulations influenced the sustainability reporting system of the company.

The scrutiny of this research required two methodologies. The first one, a historical case of study following the methodology of Yin Robert K and using the information available on the annual and sustainability reports of Statoil since 2001 to 2015 (Equinor, 2020a) (Equinor, 2020b) (Yin, 2014), in comparison with relevant global sustainability information situated on the Millennium development goals reports 2001-2015 and the Sustainable Development Goals reports of 2015 (United Nations Development Programme, 2020) (Un iLibrary, 2020). The second and core method used was an adaptation of the Global Compact Self-Assessment Tool (GCSAT) into a historical matrix and mapping of sustainability (UN Global Compact, 2020).

As a result, this research evaluated the sustainability response of Statoil through the analysis of 15 annual reports, 15 sustainability reports in comparison with the 10 principles of the UNGC and the guidelines stipulated in the 45 questions of the GCSAT to evaluate the reports through 25 economic, social, environmental and governability indicators based on the pillars of sustainable development. But also this adaptation methodology integrated the external perspective of the Global reporting Initiative (GRI) and the environmental reporting regulations of the Carbon Disclosure Project (CDP) through the evaluation of 4 CDP reports (2012-2015), 15 UNGC communication on progress (2001-2015) and 8 GRI reports (2007-2015) and the adaptation of the GRI reports by Statoil included in the sustainability reports from 2002 to 2006. The information collected into the database was discussed chronologically and analyzed theoretically in agreement with the opinion of diferent authors.

The thesis was articulated in seven chapters, one introduction chapter, one theory and method chapter, one background chapter, three chronological discussion and analysis chapters, and one chapter to describe the conclusions. The first and second chapters describes the research aspirations and methodology followed. Chapter 3 provides with a background of the evolution of sustainability, sustainable development and how the oil and gas industries embrace those concepts. While the four, five and six chapters were formulated to answer *¿How did Statoil embrace sustainability into its guidelines, operations and reporting system from 2001 to 2015?* through and analytical and chronological evaluation of the sustainability history of Statoil in each chapter as follow.

Firstly, Chapter 4 analyzes Statoil's financial performance and business expansion, throughout three subchapters discussed chronologically. Which two first subchapters introduce the lector with the economic performance and territory coverage of Statoil before its merge with Hydro, the influence of the OPEC on the prices after the oil crisis of 2004, and how does it affect the company sustainability. While the third subchapter tells the lector how was the administrative and economical changes of StatoilHydro, the separation of Statoil Fuel & Retail, and an analysis of the repercussions of the economic crisis of 2008 over the company performance. To realize this analyzes, the researcher used principally the information available into the Statoil's annual reports to create 9 indicators: 1.Total revenue, 2.Total purchases of oil and natural gas from the Norwegian state, 3. Effective tax rate, 4. production cost, 5. crude oil prices, 6. gas revenue, 7. oil and gas production, 8. economic impacts, 9. GRI response. And evaluated them in agreement with the GCSAT guidelines, the MDG targets, the UNGC communication on progress and GRI index requirements.

Chapter 5 answers the question of *Did Statoil implement strategies of anti-corruption, corporate social responsibility, human and labor rights, partnerships, gender equality, and non- discrimination into its sustainability reports between 2001 to 2015?* Through an the analysis of 9 indicators such as 1. Human rights, 2. Poverty and Education, 3. Labor rights, 4. Employees, 5. Gender Equality, 6. Non-discrimination, 7. Responsibility 8. Partnerships, 9. Transparency. Which creation was based on the HU.1.B "Protective equipment and training", HU.4 "Land and Property", HU.4.C "Community engagement", HU.5.A "Product Stewardship", HU.6.A "Human rights in the country of operation", LA.2.A "Forced and compulsory labor", LA.3.A "Child labor and young workers", AC.1.A "Signaling non-corrupt environment", AC.1.B" Anti-corruption risk assessment" and AC.1.D "Anticorruption procedures" questions and standards of the Global

Compact Self-Assessment Tool of United Nations taken from (United Nations Global Compact, 2020h)(United Nations Global Compact, 2020b)(United Nations Global Compact, 2020j)(United Nations Global Compact, 2020e)(United Nations Global Compact, 2020f)(United Nations Global Compact, 2020a) (United Nations Global Compact, 2020c)(UN Global Compact, 2020b).

In addition, this chapter evaluated all of those indicators in comparison with the response of the sustainability and annual reports of Statoil into the UNGC communication on progress and the GRI report of each year from 2001-2015(United Nations Global Compact, 2020d). Finally, the results have been presented in two subchapters that analyze the reporting response of Statoil before the merge with Hydro in 2007 using the MDGs 1,6, 3 and 8 as a whole background of global analysis, and after the merge from 2008-2015 to analyze the changes of the reporting system of StatoilHydro and Statoil with the difference than in 2015 the analysis substitute the MDGs comparison analysis for the SDGs 1,2,4,5,7,8,9, 10 and 17, which guidelines were taken from (United Nations, 2015c)(United Nations, 2017a).

Chapter 6 analyze the question of *Which were the most remarkable environmental reporting changes experienced by Statoil's annual and sustainability informs between 2001 to 2015 influenced by the global regulations of the Kyoto Protocol and the Paris agreement?* But also presents a complete investigation of how the global regulations and climate change awareness pressure influenced the Norwegian regulations and oil and gas industry compromises to reduce their GHG emissions. The chapter is divided in 3 subchapters chronologically from 2001-2007 period before the merge, 2008-2012 period of commitment of the Kyoto protocol and 2012-2015 years with intense global pressure for an energy transition. The methodology used was the creation of 7 environmental indicators in agreement with the key environmental parameters of the MDGS, CDP and GRI, such as: 1.CO₂ emissions, 2. Nitrogen Oxide emissions, 3. Harmful Chemical Discharges (HCD), 4. Friendly technology improvements and renewable energy, 5. Climate change strategies, 6. Energy consumption, and 7.Water regulations, all of them discussed through the environmental regulations stipulated by the Kyoto Protocol, the Norwegian adaptations of those regulations by the Norwegian Ministry of Environment during 2001 to 2015. Finally the last subchapter was also analyzed trough the Carbon Disclosure Project benchmark and the response and compromises of sustainability of Statoil with the Paris Agreement of 2015 (UNFCCC, 2008)(Norwegian Ministry of the environment, 2006)(Carbon Disclosure Project, 2012)(United Nations, 2015a).

Finally the Chapter 7 evaluates the results of the Chapters 4, 5 and 6 to create general conclusions of how

was the sustainable behavior of the company, which were the biggest challenges that the enterprise experienced, how it overcome them , how the social, political, environmental and economic factors were correlated and mainly how the company report them in its sustainability and annual reports from 2001 to 2015.

2.2.2 Methodology Strengths and limitations

For many historians and researchers that seek connections between past events and discover the unknown, have been a big challenge. Yin Robert recognizes the complexity of building a case of study, taking into consideration three essential procedures. Firstly, choose relevant and articulate data, secondly, write objective and reliable based on facts and finally find the historical interconnections between the actors and evidences involved in the cases studied (Yin, 2014 p. 3-4).

For this research, the biggest challenges were the collection of data and objectivity, as a result of the global pandemic the COVID- 19 that changed the job and lifestyle regulations of Norway since March 2020. The whole collection data as was planned through interviews was cancelled, obliging the researcher to use secondary data only. However, qualitative research and the development of a case of study overcame those interferences thanks to the great accessibility of Statoil´s sustainability and annual reports, the briefings of the CDP, GRI index and UNGC, and of course the guidance of the master thesis supervisor.

Finally, the biggest advantage of using the adaptation of the GCSAT with a historical case together strengthened the reliability and objectivity of this analysis. As a result, the case of study narrated chronologically the development of the facts and challenges that concerned the sustainability of Statoil, while for the other side the adaptation of the GCSAT into a mapping of sustainability permitted the understanding of how environmental, social, political and business indicators were correlated between each other, and how their past improvements affected and beneficiated the operations of Statoil. But also the use of the 10 UNGC principles, the CDP, and the GRI index Statoil´s reports, allowed the writer to take a global perspective of the sustainability requirements of different benchmarks and not only by her own impression of the GSAT indicators.

2.3 ETHICAL ASPECTS

To write a reliable and ethical historical approach is not an easy task, many historians have had to overcome the paradox of subjectivity and objectivity implicated in historical research. Carr, Flynn, and Makkreel claim that a writer can be influenced by social or political trends and project those ideas into the investigation, creating as a result a disruption of the real facts that happened (Carr, Flynn, & Makkreel, 2004). For this master thesis the writer used her engineer background on hydrocarbons and master education in globalization and sustainable development to generate an objective point of view of the data collected, being careful to don't get influenced by the political trends and environmental uncertainty involved on the hydrocarbon industry. In addition, using the guidelines of GCSAT, the GRI index, and CDP allowed the evaluation of the Statoil's sustainability history from the perspective of those organizations, and not only for the information available in Statoil's sustainability and annual reports.

Past is irrecoverable and is the responsibility of the writer, to tell the truth in a way to avoid relevant concerns such as plagiarism and the use of no trustworthy sources of information. Bill Marsh analyzed plagiarism as the action to take credit for work and effort that is not yours without taking any ethical consideration about it (Marsh, 2012). Nevertheless, the topic by itself involves more than taking the information, plagiarism involves the lack of reliability of the evidence that the writer is presenting. In another hand, all the information and data used in this research were available online into the libraries of the United Nations and Statoil. All the information relevant to GRI Index, UNGC and the CDP were available to the public and they use were explicitly detailed in this research.

CHAPTER 3: BACKGROUND

3.1 Hydrocarbons industries and sustainability

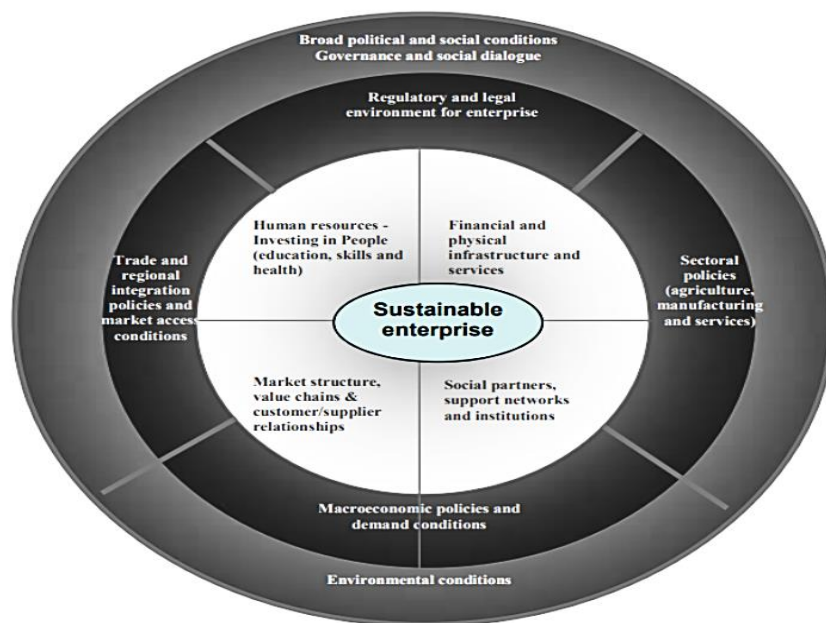
From a historical perspective, Ann- Kristin Bergquist argues that industries have been the key to global economic expansion but also environmental crisis since the industrial revolution, specifically industries of extraction, transformation, and commercialization of fossil and non-renewable materials (Bergquist, 2017 p. 2). However, business is like yin and yang, in one way they can drive financial growth and development, generated welfare, technology, and new employments; on the other hand, the expansion of big companies also generate pollution and increase the breach between social classes (Bergquist, 2017 pp. 2-3)(Chandler, Amatori, & Hiokono, 1997 cited by Bergquist, 2017)

The oil and gas industry is no exception to this trend, in one way, hydrocarbon income and investments have played a very important economic and political role in the welfare of an economy such as Norway, where petroleum activities represented approximately 14% of the gross domestic product in 2017 (Norwegian petroleum directorate, 2018 p. 6). But in another way, oil pollution has many negative effects. Firstly, Oil spills can cause severe problems for the ecosystems, such as toxicity, relocation of essential minerals for the biota, bioaccumulation in organisms and also can cause severe cancer and illness in mammals after the exposition, including humans (US. EPA, 1989) (Jafarinejad, 2017 p. 86). For example, during 1979 Norway experienced one of the saddest environmental crisis with the death of nearly 20,000 seabirds for oil toxicity and oil attached to feathers that froze them to death due to the low temperatures in the north of Norway (Barrett, 1979 p. 253). Secondly, onshore and offshore operations generate greenhouse gas emissions such as Carbon dioxide (CO₂), Methane (CH₄), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Nitrous Oxide (N₂O) and Sulphur hexafluoride (SF₆), which influence the increase of the greenhouse effect and the rise of the temperature of the earth, having serious consequences on climate change (Jafarinejad, 2017 p. 91-92) (UNFCCC, 2020) (UNFCCC, 1997 p. 22).

To overcome those problems, enterprises and governments have integrated sustainability strategies into their management, such as health and safety, corporate responsibility, economic management, labour and human rights, community impacts and environmental regulations in agreement with the pillars of sustainable development. However, sustainability and sustainable development are not the same, the United Nations

Educational, Scientific and Cultural Organization “UNESCO” recognizes sustainable development as a way to embrace economic, social and environmental aspects supported by governance and cultural directions, while sustainability is accepted as the goal to achieve (UNESCO, 2020). Sustainability can be analyzed from a micro, macro and meta-perspective that involve customers, suppliers and employees in the first level, macroeconomic policies with a geographical magnitude in the second level and the inclusion of governance, economic, social and environmental global situations, decision making and guidelines of the company (See Figure. 1) (International Labour Organization, 2007 p. 6-8) .

Figure. 1 Sustainable Enterprise development



Source: (International Labour Organization, 2007 p. 7)

Nonetheless, why should the oil and gas industries implemented sustainability into their operations? First of all is important to recognize that, applying sustainability in a limited resources world, such as the hydrocarbon sector, is a multi-dynamic concept to reach, because it has evolved constantly during the decades, and will continue to do so in the future years, with the proposition of satisfying the new generations needs with the resources and fuel sources available in each period of time (Bollino & Polinori, 2011). Geoffrey Jones in his article “Profits and Sustainability” states that from the decade of the 1930 years, American and European enterprises started to include antipollution laws that generated a first environmentalist wave, which was reinforced in 1960 by a science-cultural explosion founded on the

political, economic and social critics of capitalism after World War II (Bergquist, 2017 p. 7) (Jones, 2017). However, before 1970 the priorities of the oil and gas industry were focused on business expansion, new oil discoveries, and increasing profits margins. For example, Royal Dutch Shell started its operations in the Norwegian territory before Norway discovered oil in the Balder field in 1967 and found its first significant oil discovery Ekofisk field, which is considered as the best Christmas gift of the Norwegian history due to it being discovered on December 1969 (Hydro, 2020). On the other hand, Shell started its business as a service provider with service stations under the name of Norsk- Engelsk Mineralolie Aktieskab in 1912, though, it was not until April 1965 that Shell got its first license round (Norwegian petroleum directorate, 2020) (Trude, 2018) (Shell, 2012). While other enterprises such as Norsk Hydro born in 1905 as a nitrogen and electric industry, reoriented its practices to the industrialization of hydrocarbons since 1962, but started its operations with the discovery of the Ekofisk oil field in 1969 (Hydro, 2020a)(Hydro, 2020b).

Secondly, oil and gas industries modified their operations and guidelines gradually during their history, some scholars debate that pro-environmental movements, social pressure, political changes and technological improvements were the dominant factors, while others identify the 1990s as a decisive period behind hydrocarbons industry transition. Jones and Bergquist identify the creation of the Brundtland report during 1987 as a crucial dividing line of the conceptualization of sustainability and sustainable development (Jones, 2017)(Bergquist, 2017 p. 20). This is due to the World Commission on Environment and Development (WCED) scientific community, world leaders, and United Nations Organizations consolidating the term of “Sustainable Development “defining it, in their article 27 as “The development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (United Nations, 1987 p. 15). Consequently, this conference reoriented the world vision of enterprises, governments and civil society to be more understanding with the environment and vulnerable society.

On another hand, one of the most remarkable worldwide arrangements that redirected the oil and gas industry management to the way of the sustainability has been doubtless the Kyoto Protocol of 1997 (UNFCCC, 2020b). The protocol addressed the agreements of the Framework Convention on Climate Change of 1994 through the implementation of emission targets of the major greenhouse gases: Carbon dioxide, Methane, Nitrous oxide, Hydrofluorocarbons, Perfluorocarbons and Sulphur hexafluoride (UNFCCC, 2020a). Consequently, industrialized sectors such as energy industries, transports, industrial processes, and agriculture have had the obligation to adapt their practices and operations in agreement with

national circumstances and the agreements of the protocol to mitigate the climate change effect of those gasses (UNFCCC, 1997 p. 2-20). For example in 2000 Shell finally introduced sustainability management into its operations, focused in 6 procedures factors: downstream gas and power, oil products, chemicals management, renewable energy and other business (Shell, 2000 p. cover pages). While Norsk Hydro discussed sustainability since 1999, but it was not until 2001, when Norsk Hydro took their practices into a more sustainable direction through industry responsibility, consumption of natural resources, eco-efficiency, organizational changes, health and safety, security, corporate social responsibility and partnerships (Norsk Hydro, 1999 p. 15) (Norsk Hydro, 2001pp. cover page, 34-40).

Finally, for another perspective Tvinnereim, Lægreid and Fløttum agree with Bergquist that the social pressure and pro-environmental behavior have pushed oil and gas industries producers to reorient their practices towards energy transition. However, they include the political and technological factors behind the oil transition (Tvinnereim, Lægreid, & Fløttum, 2020 pp. 2-8). First of all the sustainability guidelines and operations need to be sociably acceptable, such as gender effects, public point of view, and political demands (Tvinnereim et al., 2020 pp. 1-3). Secondly, the enterprises have used in their favor the technological improvements to develop sustainability such as greenhouse gas emission reduction and renewable energy transition. Third, the concern about climate change during the last few decades also favored the social acceptance of the sustainability practices of the hydrocarbons industry and benefited its corporate responsibility and credibility (Koolwal & Khandelwal, 2019) (Tvinnereim et al., 2020 p. 3).

3.2 The evolution of Sustainable Development and Statoil 1972-2001, a historical perspective through the United Nations conventions

The history of Statoil began during times of changes in terms of sustainability in 1972, the same year when the United Nations conference on the Human Environment (UNCHE) was celebrated in Stockholm (STATOIL, 2001b p. 8). The UNCHE was built based on 26 principles that discussed global topics such as natural resources consumptions and protection, human rights, economic and social development, education, peace, weapons eradication, technology, and co-collaboration (United Nations, 1972 pp. 1-3). It is remarkable that this conference had a strong environmental protection orientation however, the conference also proclaimed that environmental problems were related to social inequalities, political conflicts and lack of economic growth (United Nations, 1972 pp. 1-5). One might even say, that during the 1970s the concept of

sustainable development was not clearly elucidated, the need of analyzing the global problems from a social, economic, political and environmental perspective was evident, and the UNCHE 1972 played an important role to help United Nations, global leaders and the scientific community to settle the bases of sustainable development. On the other hand, Statoil as a newborn oil company reported its first annual report during May 1973 in a very simple paper in agreement with the aksjelovens § 80 (the companies act § 80), embracing topics such as the company business and the capital required, but without including anything about sustainability (Statoil, 1973 pp. 1, 6).

Nevertheless, the linkages between the oil and gas industry and the use of natural goods and its environmental repercussions was also a priority topic of discussion during the 1970s. Some of the strongest policies and recommendations of the United Nations for the Energy Industry were focused on the carbon dioxide emissions and consumption trends. For example, recommendation 58 of the UNCHE 1972 demanded oil and gas industries to be clear and reliable to share national experiences and information about their practices and ecological consequences. While, on the other hand, recommendation 59 introduced the need of multilateralism reports in collaboration with global authorities such as the International Atomic Energy Agency (IAEA) and the Organization for Economic Co-operation and Development (OECD), to describe the consumption tendencies, and share improvements of new technology and more ecological practices (United Nations, 1972 p. 19).

The transitory years from 1970 to 1980 were characterized by economic fluctuations and challenges for the global oil industry and of course for Statoil. During the 1970s, the world suffered a global energy supply crisis, plus a reduction of 2.5% of the global GDP, that consequently generated a dramatic increase of the oil prices after 1973 (World Economic and Social Survey review from 1972-1990, cited by World Economic and Social Survey, 2017 p. 50) (Statoil, 1974 p. 4). Furthermore, the end of the Bretton Woods system and the oil crisis of 1973 created a period of unemployment and a global recession that maximized the differences between developed and developing countries during the '80s, Latin America and Africa suffered unproductivity in their development, while developed countries implemented restrictive monetary policies to stabilize their economy (World Economic and Social Survey, 2017 p. 59-61). As a result, the increase of oil prices also amplified the value of the Norwegian hydrocarbons reserves but generated a global responsibility to the Norwegian enterprise to adjust itself to the new oil scenario (Statoil, 1974 p. 4)

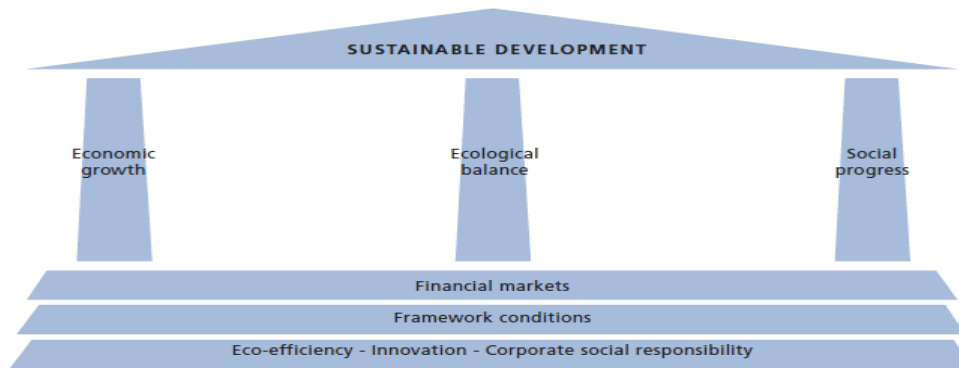
After the implementation of the concept of Sustainable Development in 1987, the world concerns were

focused on food security, ecosystem protection, human resources, production industry models and energy choices (United Nations, 1987 pp. 3-100). One of the UNCHE's objectives was the reduction of poverty and environmental impacts resulting from differences in the global economic growth, which aim was reinforced five years after during the conference of Rio declaration on environment and development in 1992. This review conference also established the previous strategy of the creation of strong policies and social participation in cooperation with governments, academia, organizations, and society to protect the environment and impulse the sustainable development (United Nations, 1987 p. 15) (United Nations, 1987 Article 27- 30 p. 15)(United Nations, 1992 p. 1).

However, to achieve sustainable development has not been an easy task. Some authors, such as Desta Mebratu argue that sustainable development has two big challenges to overcome, the first one, the aspects involved behind of the word " need", which represent to satisfy all the necessities of the society through a global effort and the second the "limitations of technology and social response" of each time (Mebratu, 1998 p. 501). For example, the needs of the society of the 20th century was less in terms of energy demand than the demands of the actual generation, but at the same time the technology of that age was not able to cover 100% the needs of that society, by contrast nowadays the technology improvements are able to cover a bigger demand, but the population is many times bigger, which made almost no possible to fully cover the energy demand.

As was explained before, since 1972 Statoil has exposed its annual reports every year, with topics such as the progress of the company, its operations and agreements, capital, and business expansion. But it was not until 1999 in its "A more focused Statoil" annual report, when the company included the concepts of sustainability and sustainable development into its reports. The first topics analyzed were the official demand for zero harmful discharges to the sea, the environmental reorientation of the company to adapt itself to the global requirements and its goal to achieved sustainability through its development work (Statoil, 1999 pp. 38, 41). During the following years Statoil developed it operations trying to orient them to environmental and social standards, and finally, during 2001 Statoil created its first sustainability report based on three pillars of financial, social and environmental management (See Figure. 2).

Figure 2 Sustainable development pillars



Source: World Business council for sustainable Development, cited by (STATOIL, 2001b p.8)

Their actions and policies were focused in the reduction of CO₂ emissions, more sustainable drilling and exploitation activities to reduce the impact in the Arctic ecosystems and reliability in transparency and governance with a high value of human rights (Statoil, 2001b p. 9). From 2001 until today Statoil has presented every year a sustainability report to show their guidelines and structure system to support the information provided by the annual reports and satisfy the transparency requirements that the society, Statoil's partners and governmental authorities (Equinor, 2020b) (Statoil, 2001b).

3.3 From Millennium Development Goals to the Sustainable Development Goals

The mother of the sustainable development, Gro Harlem Brundtland¹, claimed the essential value of multilateralism's policies through the shared work of government, academia, companies and society globally to achieve sustainable development (United Nations, 1987 p. 4-7). However, as was explained before, the sustainable development conception and priorities transformed its targets and policies in agreement with the global requirements of each decade. As a result, the implementation of new technologies and sharing of knowledge was the priorities of the UNCHE 1972, while for WCED 1987 was stabilize the economic crisis without put on risk the environmental resources. But was not until, the Convention on Climate Change of 1994 when the Kyoto Protocol settled the strongest bases to reduce the greenhouse gas emissions and mitigate the climate change.

¹ Prime Minister of Norway (1981, 1986-89 and 1990-96)

In September 2000 the global leaders met at New York to celebrate the United Nations Millennium Declaration, which aim was to develop international strategies to guarantee peace and security, create development and eradicate poverty, safeguard the environment, increase good governance and defeat the human rights (United Nations, 2000)(UNDP, 2015). With the aim to cover those needs eight Millennium Development Goals (MDG's) were settled, each of them focused in the core topics of sustainability and the necessities of the new millennium to be achieved on 2015, covering topics such as health, economic growth, social equality, environmental protection and organizational cooperation(See Figure. 3)(United Nations Development Programme, 2020).

Those eight goals were executed during fifteen years by different United Nations Agencies such as United Nations Development Programme (UNDP), United Nations Children's Fund (UNICEF), World and Health Organization (WHO), United Nations Environment Programme (UNEP), Food and Agriculture Organization (FAO), with a very remarkable participation of national governments, academia, and society. That made it possible to reduced extreme poverty by 9.1% from 1990 to 2000 to almost 43% during 2000 to 2015, increased the participation of women in global decision making in more than 90%, improved the newborn's survival in more than 30% and decline the maternal mortality in almost half, from 1990 to 2000 respectively (United Nations, 2015 p. 4-6). However, not all the targets were 100% satisfactory achieved, the ozone layer continued depleting and the GHG emissions increased, millions of people remained poor, the cases of malaria and tuberculosis deaths decreased but the prevalence rate remained in 42% and 41% correspondingly (United Nations, 2015 p.7-8).

Figure 3 Millennium Development Goals



Source: (United Nations Development Programme, 2020)

During 2015, the deadline of the Millennium Development Goals was over, but the need to continue achieving their targets was evident, as a result, the Sustainable Development Goals (SDGs) born during the 2030 Agenda for Sustainable Development to continue with the progress already implemented (United Nations, 2017 p. 1). The main difference between the MDGs and the SDGs was the split of the task and targets into seventeen more specific goals in comparison with the previous eight goals of the MDGs (See Figure. 4). For example, the first goal of the MDGs was the “eradication of extreme poverty and hunger” that has been a priority since UNCHE 1972, was divided into two dynamic goals, the first one “No poverty” and the second “Zero Hunger”, both of them desired to support the most vulnerable society trough social protection systems and better jobs but also provide with food security and develop better strategies of food production (United Nations, 2017 p. 4-5).

Figure 4 Sustainable Development Goals



Source: (United Nations Development Programme, 2019)

It is appreciable, than the objectives 7, 8, 12, 13 and 17 have been the most relevant for the oil and gas industry reporting management and guidelines creation, and it is due to their strong correlation with the Paris Agreement of 2015 and the corporate sustainability of the companies to create their guidelines. For example, the Article 2 of the Paris Agreement incited to reduce to GHG emissions to limit the increase of temperature below 2°C, while Goal 13 “Climate Action” motivated the creation of climate change mitigation strategies with more than 141 countries and the European Union during June 2007 (United Nations, 2017 p. 11)(United Nations, 2015a p. 3). These agreements have represented a big challenge for oil nations and energy

companies to follow. For example, the Norwegian Ministry of Finance claimed in 2017 that the welfare of Norway was exposed to climate risk, since almost 14% of their GDP and a big part of the government pension fund (GPF) coming from the oil and gas incomes and investments (Norwegian petroleum directorate, 2018 p. 6) (Norwegian Ministry of the environment, 2006 p. 10).

But the SDGs and the Paris Agreement of 2015 were not designed to remove the oil and gas production of the world, they were designed to work together and achieve the targets of sustainable development before 2030 (United Nations Development Programme, 2019). For example the SDGs number 7 “Ensure Access to affordable, reliable, sustainable and modern energy for all” incited to adopt better financial policies and share new technologies to increase the use of renewable energy and energy efficiency (United Nations, 2017 p. 7), which also was suggested by the Official Norwegian Reports NOU 2018:17, it claimed that a launch of oil and gas price scenarios and the implementation of strong climate policies can help the Norwegian oil companies to adapt their practices (NOU, 2018 p. 26). In another way is important to mention that a company is something more than an institution, a company is its employees, partners, and its historical reputation. This is why the collaboration between SDGs is very important for the sustainability of the hydrocarbon’s industries, specifically between the SDG 8 “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”, 12 “ Ensure sustainable consumption and production patterns” and 17 “ Strengthen the means of implementation and revitalize the global partnership for sustainable development” (United Nations, 2017 p. 8-13).

CHAPTER IV: DRIVING ECONOMIC SUSTAINABILITY THROUGH BUSINESS STRATEGIES AND HYDROCARBONS MANAGEMENT

4.1 Introduction

The sustainability history of Statoil and Hydro experienced important changes before they became the most powerful company of the Norwegian continental shelf with more than 3/4 of the Norwegian continental shelf oil production after their merger as StatoilHydro on October 2007 (Institutt for arkeologi, konservering og historie, 2016 p. 12) (Equinor, 2020a).

Norsk Hydro was founded in 1905, developing for many decades activities related to the electric and nitrogen industry, until their integration to the oil and gas sector in 1962 and operations in 1969 (Hydro, 2020a)(Hydro, 2020b). By contrast, Statoil born in 1972 as a state company but it was not until 2001 when the company became listed on the Oslo and New York stock exchanges and expanded its operations and business progressively after the authorization of the SDFI reform of 1985, that allowed the company the ownership (Statoil, 2005 p. 6)(Equinor, 2020a). However, their sustainability reorientation was almost at the same time, Norsk Hydro's annual report 1999 explained the topic of sustainability very briefly, claimed the importance of respect and sustainable conduct between the relations of financial profits, environment, cooperation, and social aspects to ensure human rights and a good work environment, which was the same year when Statoil in its "A more focused Statoil" annual report introduced topics such as sustainability and sustainable development(Norsk Hydro, 1999 p. 15) (Statoil, 1999 pp. 38, 41). Nevertheless, it was not until 2001 when both companies discussed sustainability in a more structured way, for Hydro its practices were focused on responsibility, consumption of natural resources, eco-efficiency, organizational changes, health and safety, security, corporate social responsibility, and partnerships. While Statoil created its first sustainability report apart of the annual reports and focused its sustainability practices in product stewardship, impacts of production, social impacts, HSE, business, ethics, labor standards, diversity and climate change, and economic impact (Norsk Hydro, 2001)(Statoil, 2001b pp. 3-9).

The history analysis reveal that external and internal factors can interfere into the sustainability of an enterprise. The goal of this chapter, is answer the secondary research question of *How did the annual and sustainability reports evolve through the Statoil's business and production expansion from 2001 to 2015 ?*. As a result this chapter discuss the sustainability response of Statoil through three subchapters designed to

display the economic performance of the company in a chronological way, with a clear analysis division before and after the merger of Statoil and Hydro in 2007. Those subchapters have been discussed in agreement with the Global Compact Self-Assessment tool (GCSAT) guidelines, the MDG targets and indicators, the UNGC communication on progress and GRI benchmark through 9 economic indicators total revenue, total purchases of oil and natural gas from the Norwegian state, effective tax rate, production cost, crude oil prices, gas revenue, oil and gas production, economic impacts, GRI response and their comparison with the Norwegian Government Pension Fund.

Subchapter number one “Norway, Statoil and the overcome of Paradox of plenty” describes the economic performance of Statoil before 2007 in comparison with the evolution of the Norwegian Government Pension Fund and the participation of the SDFI. This subchapter also analyzes the role of the Norwegian state into the history of Statoil.

The Subchapter number 2 “From Statoil to StatoilHydro an analysis of business expansion and operations 2001-2007” explain how the enterprise enlarge and expand its business and operations abroad during the period of 2001-2007, its production and revenue fluctuations, but also how the company overcome the oil crisis of 2004, its repercussions. But also this section exemplify how was the economic management before the merge.

The subchapter number 3 “Merging sustainability and business towards economic fluctuations 2007-2015” analyze the difficulties and strengthen in management experienced by the company after the merge. The repercussions of the separation of Statoil fuel & retail in 2010, the consequences of the economic crisis of 2008 and finalize with an approach of the economic- environmental challenges that the Paris agreement represented for the Oil and gas industries in 2015.

4.2 Norway, Statoil and the overcome of Paradox of plenty

“It is generally observed, that in countries of the greatest plenty there is the poorest living “

The spectator 1711. Taken from: (Steele, 1711) cited by (Wikipedia, 2020)

The Norwegian state played an important role in Statoil’s history, being the first shareholder of the company but also as the owner of the hydrocarbons and subsea oil on the Norwegian Continental Shelf (NCS) (Statoil, 2001a p. 3) (Equinor, 2020b). The relationship between Oil and the Norwegian welfare has been

supported since the '70s, with more than NOK 15,400 billion in the GDP and regulated through the Ministry of Petroleum and energy and the SDFI mechanism (Norwegian Petroleum Directorate, 2020b). While the Norwegian Government Pension Fund (NGPF) global increased from approximately NOK 614 Billion to NOK 2019 Billion in 2007 the Statoil's total revenue increased from NOK 236.34 Billion to NOK 522.80 Billion respectively (Norwegian Petroleum Directorate, 2020a)(Statoil, 2001a pp. cover page-2)(StatoilHydro, 2007 p. cover page). However, it is essential to remember that Statoil has been an international company present in more than 25 countries since 2001, however, not all the countries that Statoil had operations and business received remarkable sustainability welfare during those years. That is why part of the business sustainability of Statoil was based on human capital, value creation and business planning in one way as the global regulations stipulated Statoil paid signature bonuses for rights of exploration to host countries and in another way, the company also helped with social investments and development projects abroad (Statoil, 2002b pp. 6, 41) (Statoil, 2006 p. 8).

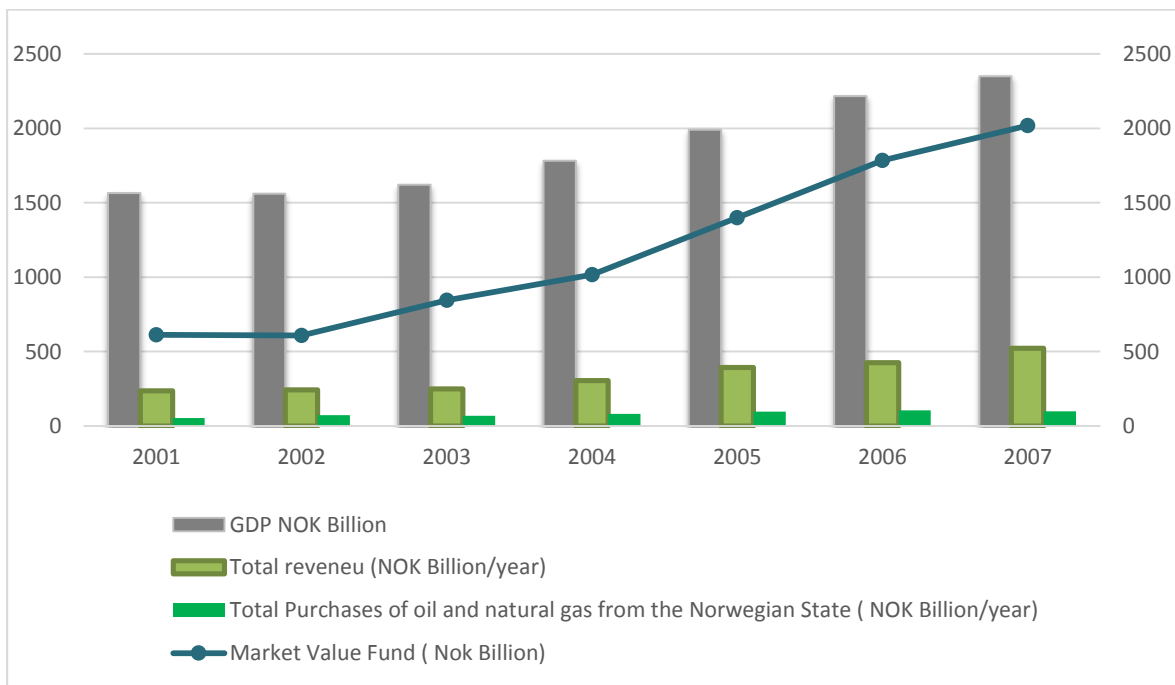
But why the oil welfare of Statoil and Norway has been visible into the Norwegian economy but not in all of the countries where the enterprise was located? Jonathon Moses Wayne and Bjorn Letnes, professors and oil experts of the Norwegian University of Science and Technology, explain this situation through the paradox of plenty. For them, two aspects contribute directly to the welfare of a country which depends on a non-renewable source, the decreased competitiveness and a poorer economic performance (Moses & Letnes, 2017 pp. 6-8). However, this research also found that the success of Statoil was based on their human capital investments, technological improvements, key business and partnerships.

For Moses and Letnes, the first aspect is the “decrease in competitiveness”, which is focused in two main aspects, the first one an unbalance between the production and a national economy centralized in only one strategic activity that creates inflation and with it, the famous term of Dutch disease(Moses & Letnes, 2017). For example for an economy such as Venezuela, after the oil discovery in the '20s their production increased moderately until 1976 when they decided to create PDVSA Petr6leos de Venezuela S.A and increase the ownership; however, due to their price controls and policies based on socialism subsidies, insertion of petroleum revenues and expropriation in 2005, Venezuela's economy was not able to afford the crisis when the oil prices fell down many times after (Schwartz, 2019). By contrast, the Norwegian economy avoided that disease through the gradual insertion of oil revenues into the fluctuations of their economy, keeping the oil fund as a lifeguard in case of critical unemployment and economic crisis, but also as a fiscal mechanism of

economic stability (Norwegian Petroleum Directorate, 2020a).

Applying these facts to this master thesis analysis and the information available in the database of the Norwegian Oil Directorate, is appreciable that the market value of the government pension fund increased gradually during 2001 to 2003 raising almost a value similar to the 52% of the Norwegian GDP during 2003 with NOK 845 Billion in the market value fund (See Figure 5 and Table.1). But augmented considerably from NOK 1016 Billion to NOK 2019 Billion from 2004 to 2007 respectively, raising almost the same amount than the 85% of the Norwegian GDP during 2007) (Norwegian Petroleum Directorate, 2020a).

Figure 5. Statoil’s development in comparison with the Norwegian Government Pension Fund value 2001-2007



Source: Own elaboration based on Statoil’s annual reports 2001-2007. Information taken from : (Statoil, 2001a p. cover, 47-57),(Statoil, 2002 p. cover),(Statoil, 2002b p. 37),(Statoil, 2003 p. cover, 70),(Statoil, 2004 p. cover, 2, 75),(Statoil, 2005 p. cover, 66),(Statoil, 2006b p. cover, 68) and(StatoilHydro, 2007 p. 2, 181) and the data base of the Norwegian Petroleum Directorate available on (Norwegian Petroleum Directorate, 2020a)

Table 1 Statoil's economic sustainability and the Norwegian Government Pension Fund

Year / Indicator	Norwegian Oil Fund			Statoil's Economic Indicators				
	Market Value Fund (NOK Billion)	GDP %	GDP (NOK Billion)	Total revenue (NOK Billion/year)	Total Purchases Oil&NGL NOK Billion/year	Effective tax rate %	Gas Revenue (NOK Billion/year)	Economic impacts and signature bonuses (SB) ²
2001	614	39	1564	236.34	53.29	68.5	23.468	<ul style="list-style-type: none"> • Stortinget resolution on the stock change • Acquisition of 15% of the SDFI • Instability of markets due to the twins towers attack
2002	609	39	1560	243.81	72.298	66.9	24.536	<ul style="list-style-type: none"> • Very weak Norwegian Krone • USD 32 Million in SB to Venezuela and 4.8 to Brazil
2003	845	52	1620	249.38	68.479	62	25.452	<ul style="list-style-type: none"> • USD 5 million for Nigeria in SB • USD 32 million for Venezuela in bonus in agreement with the EITI

² SB: Signature bonuses

2004	1016	57	1783	306.22	81.487	64.1	33.326	<ul style="list-style-type: none"> • USD 2.6 million in SB in Brazil. • Reduction of 5.4 % of the Norwegian government shareholder
2005	1399	70	1990	393.40	97.078	65.6	45.823	<ul style="list-style-type: none"> • NOK 30.7 billion in profit after Taxes • USD 3.45 Million in SB to Libya
2006	1784	80	2216	425.17	104.628	66	61.134	<ul style="list-style-type: none"> • 67,500 shareholders • USD 81 Million in SB to Nigeria • USD 5.2 and 0.3 Million in SB to Brazil • USD 6.4 million in SB to Azerbaijan, • USD 53 million in SB to Angola
2007	2019	85	2350	522.80	98.498	69.59	73.4	<ul style="list-style-type: none"> • Acquisition of NAOSC oil sands Canada

Source: Own elaboration based on Statoil's annual and sustainability reports 2001-2007. Information taken from : (Statoil, 2001a pp. cover, 2, 47-48, 57),(Statoil, 2002a pp. cover, 37, 60, 64, 65) (Statoil, 2002b p. 37)(Statoil, 2003b p.36)(Statoil, 2004a p.25) ,(Statoil, 2003 pp. cover, 70- 71, 119),(Statoil, 2004 p. cover, 2, 75-76),(Statoil, 2005 p. cover, 67-68, 121),(Statoil, 2006b p. cover, 65, 68, 70) (Statoil, 2006a 61-62) and (StatoilHydro, 2007 p. 2,89, 181) (StatoilHydro, 2007B p. 16) and the data base of the Norwegian Petroleum Directorate available on (Norwegian Petroleum Directorate, 2020a)

The second factor that influences the oil welfare of a nation is the economic performance influenced by government expenditures and national economic growth (Moses & Letnes, 2017 p. 7). As was described earlier the Norwegian government used the funds of the NGPF as less as possible since the first capital transfer in 1996 (Norwegian Petroleum Directorate, 2020 a), while other countries did not take precautions and inject their oil profits into their own economies and created inflation. Statoil tried to avoid that those political problems interfered with its operations abroad, however, has been a very hard situation to overcome, specifically for terrorism situation that affected the global markets and operations in countries with conflict zones. Nonetheless, the enterprise also collaborate in accordance with the signature bonus system required and paid USD 32 million for Venezuela in bonus in agreement with the Extractive Industries Transparency Initiatives (EITI) in 2003, USD 2.6 million to Brazil in 2004 and USD 81 Million to Nigeria, USD 6.4 million to Azerbaijan, and USD 53 million in to Angola in 2006 on signature bonuses (Statoil, 2002b p. 37) (Statoil, (Statoil, 2004a p.25) (Statoil, 2006a 61-62).

Figure. 5 and Table. 1 show the development of Statoil profits in comparison with the development of the NGPF. It is appreciable that after the acquisition of 15% of the SDFI in 2001 Statoil duplicated its oil reserves on the NCS (Statoil, 2001a p. 2). However, the oil production and total revenue increased slowly during the first years, specifically the Gas revenue that increased from NOK 23.46 Billion in 2001 to NOK 33.32 Billion in 2004 but increased considerably after 2005 (Statoil, 2001a p. 48) (Statoil, 2004p. 76). 2005 was a very good year for Statoil, due that the company group raised a net income of NOK 30.7 Billion, the biggest of Statoil's history in that time (Statoil, 2005 p. 42). In comparison the development of the NGPF had a good upsurge too, and reached NOK 1399 Billion equivalent to the 70% of the Norwegian GDP in 2005 (Norwegian Petroleum Directorate, 2020). Though, as was described above the economic stability of Norway and the NGPF depended of the oil revenues and profits, but its success was based on clever economic Norwegian logistics and investments. As a result is appreciable than, the Statoil's total revenue experienced fluctuations in comparison with the total amount of the NGPF. For example in 2002 the Statoil's total revenue rose NOK 243.81 Billion equivalent to the 40% of the value of the NGPF but only NOK 425.17 Billion equivalent to the 23.8% of the NGPF during 2006. While the NGPF increased exponentially from NOK 609 Billion in 2002 equivalent to the 39% of the Norwegian GDP to NOK 219 Billion equivalent to the 85% of the Norwegian GDP in 2007. These data proves that Statoil's achievements contributed with the welfare of the Norwegian economy and NGPF, but that the key into the Norwegian economic stability was behind of a non-centralized economy, clever investments, fiscal contributions and good governance.

4.3 From Statoil to StatoilHydro an analysis of business expansion and operations 2001-2007

The economic and operations development of Statoil is characterized as a period of business stability and economic growth from 2001 to 2007. For three followed years, the company placed as one of the world's best oil and gas enterprises, recognized for the Dow Jones Sustainability World Index during 2004-2006 (Statoil, 2004 p. 27-29) (Statoil, 2005 p. 7) (Statoil, 2006 p. 8) and as the third-best ranked for the Goldman Sachs Environment, Social and Governance Index (ESG), just behind BG group and Shell in 2006 (Statoil, 2006 p. 8). In addition, the company achieved to expand its operations representation from 25 countries in 2001 to 40 countries in 2007 around the world and almost duplicate its oil and gas production from 1007 thousand boe/day to 1724 thousand boe/day³ (Statoil, 2001b p. 5) (StatoilHydro, 2007 p. 87).

The historical expansion of Statoil over the world was gradual year by year. In early 2001 Statoil had operations and business in 25 countries, the downstream operations were located mainly in European countries such as UK, Norway, Sweden, Ireland, Belgium, France, Estonia, Latvia, Germany and Denmark, and in Asia and America at the United States and Singapore. While upstream operations were practiced locally in Norway but also abroad in Venezuela, Nigeria, Angola, Russia, and China (Statoil, 2001b p. 4). The spreading out of the company to the Middle East, Asia and America were mainly by business development in 2001 in Mexico, Brazil, Turkey and Saudi Arabia (Statoil, 2001b p. 4) but also it expanded to Kazakhstan, Georgia and Algeria in 2003 and Qatar in 2004 (Statoil, 2002 p. 2)(Statoil, 2003 p. 2). However, was in 2007 when Statoil merged with Hydro that the company reached 40 countries with more than 29500 employees, 11,401 of them Non-Norwegians working in their own countries and abroad (Statoil Hydro, 2007b 1-39).

Since Statoil started to report its sustainability reports in 2001, the company had its shares secured listings on the Oslo and New York stock exchanges and expanded its operations and business progressively (Statoil, 2005 p. 6), but for Statoil Hydro was on October 1 of 2007 when they formally suited operations and participated into the stock market (StatoilHydro, 2007b p. 17). During those years Statoil also expanded its horizons and developed business to the United Arab Emirates, Egypt, Faroe Islands and Libya in 2005,

³ Thousand boe: Thousand barrels of oil equivalent (Statoil, 2012 p. 222)

Barrels of oil equivalent: Term used to standardize the oil and gas production in one unit instead of m³ and barrels, the companies use m³boe to illustrate the amount of energy equivalent in a barrel of crude oil (Investopedia, 2020)

Indonesia in 2006 and Cuba, Tanzania, Morocco, India, and Canada in 2007, the last one is very remarkable due to the oil sands project (Statoil, 2005a pp. 2-11)(StatoilHydro, 2007b).

There are many factors behind the welfare and sustainability of the oil and gas industry and the oil price, the most important are the market factors, supply, demand, volatility and of course the demand. Mats Olimb and Tore Malo Ødegård, researchers of the Norwegian University of Science and Technology analyzed the factors that influenced the oil price from 1995 to 2009 through a time-varying model, and they found some fluctuations of the OPEC spare production capacity (Olimb & Ødegård, 2010 pp. 10-59). Their model found that before 2004 OPEC possessed the spare production capacity to regulate oil prices if the boost production should price increase above desired ranges. Nevertheless, in 2004 the spare production capacity drop below one million barrels per day, which made the OPEC no longer had enough capacity to spare, and keep the oil prices and production stable until 2009 when the OPEC restrictions of oil production regulated the spare capacity levels(Olimb & Ødegård, 2010 p. 34).

On another hand the sustainability of Statoil have been influenced also by the fluctuations of the oil prices and oil production, for example in 2001 the Norwegian authorities reduced the production during the year to avoid dramatic loss due to the oil prices drop (Statoil, 2001a p. 11). While during 2004 the Brent blend prices rised the 38.3 dollars per barrel (USD/bbl) and 258 Norwegian kroners per barrel (NOK/ bbl) due to the weak dollar exchange rate, the oil and gas production increased from 1007 thousand boe/day in 2001 to 1106 thousand boe/day in 2004 (See Table. 2) (Statoil, 2004 p. 60). In comparison with the model of Olimb & Ødegård, this analysis research found that the behavior of the oil prices, production oil cost, and oil and gas production of Statoil from 2001 to 2007 was affected for more than the spare capacity of the OPEC and the global market factors. The figure 6 shows that the crude oil prices of the Brent blend increased from 24.4 USD/bbl in 2001 to 70.5 USD/ bbl in 2007, the prices increased almost four times, with a very noticeable increase after 2004 as the model of Olimb & Ødegård referred. While on another hand, the production did not augment dramatically due to the market risks and the Norwegian oil production regulations, however, during 2007 after the OPEC production cuts of 2006 the Statoil's production reached 1724 thousand boe/day and a very low production cost production of 7.7 USD/ bbl that was almost a 10.9% of the crude oil price sale of the Brent benchmark of 70.5 USD/bbl in 2007 (StatoilHydro, 2007 p. 6).

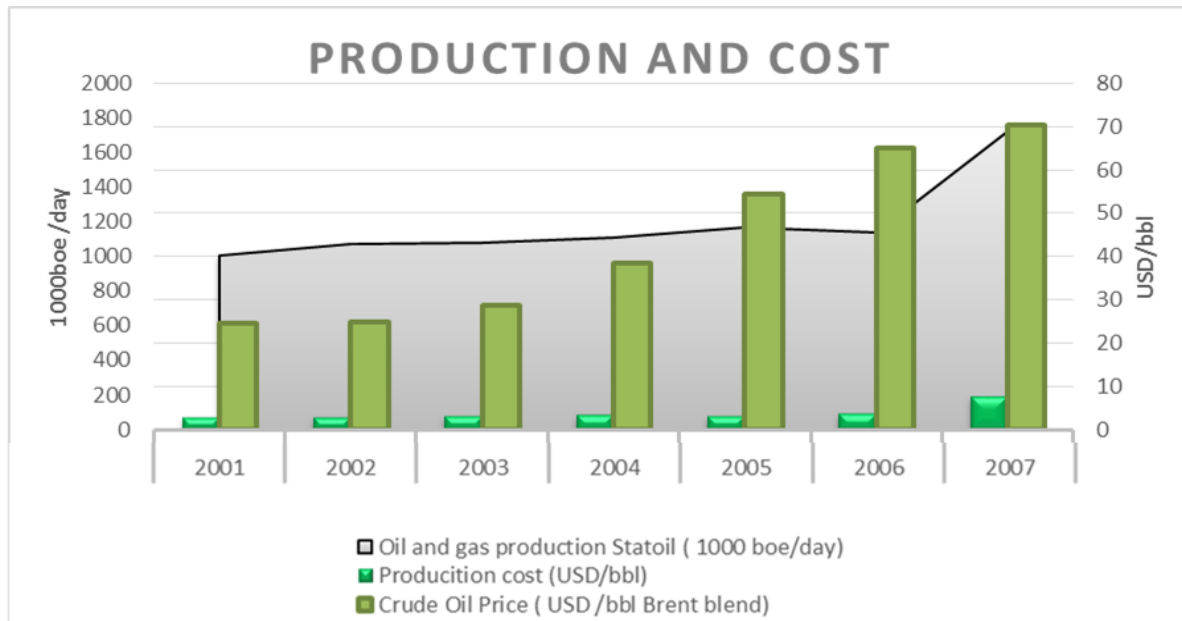
Table 2 Statoil's economic indicators 2001-2007

YEAR / INDICATOR	REVENUE		COST			SALES		ECONOMIC GROWTH	
	Total revenue NOK Billion/year	Total Purchases Oil&NGL NOK Billion/year	Effective tax rate %	Production cost NOK/bbl.	Production cost USD/bbl.	Crude Oil Price (USD /bbl. Brent blend)	Gas Revenue (NOK Billion/year)	Oil and gas production Statoil (thousand boe/day)	Oil and NLG production bbl/ day
2001	236.34	53.29	68.5	24.9	2.92	24.4	23.468	1007	754,900
2002	243.81	72.298	66.9	24	3.05	24.7	24.536	1074	748,200
2003	249.38	68.479	62	22.3	3.2	28.8	25.452	1080	737,500
2004	306.22	81.487	64.1	23.5	3.5	38.3	33.326	1106	712,600
2005	393.40	97.078	65.6	22.2	3.35	54.52	45.823	1169	701,000
2006	425.17	104.628	66	26.6	3.93	65.14	61.134	1135	668,000
2007	522.80	98.498	69.59	44.1	7.7	70.5	73.4	1724	831,000

Source: Own elaboration based on the Statoil's Annual reports. Taken from (Statoil, 2001a pp. 1, 40-47, 50

(Statoil, 2002 p.1, 60, 67-70)(Statoil, 2003 p. 1, 27, 65-75) (Statoil, 2004 p.1, 70-75)(Statoil, 2005 p. 1, 26 , 64-67)(Statoil, 2006b p. 1, 28, 64-69, 126)(StatoilHydro, 2007 p. 2, 6, 87, 211)

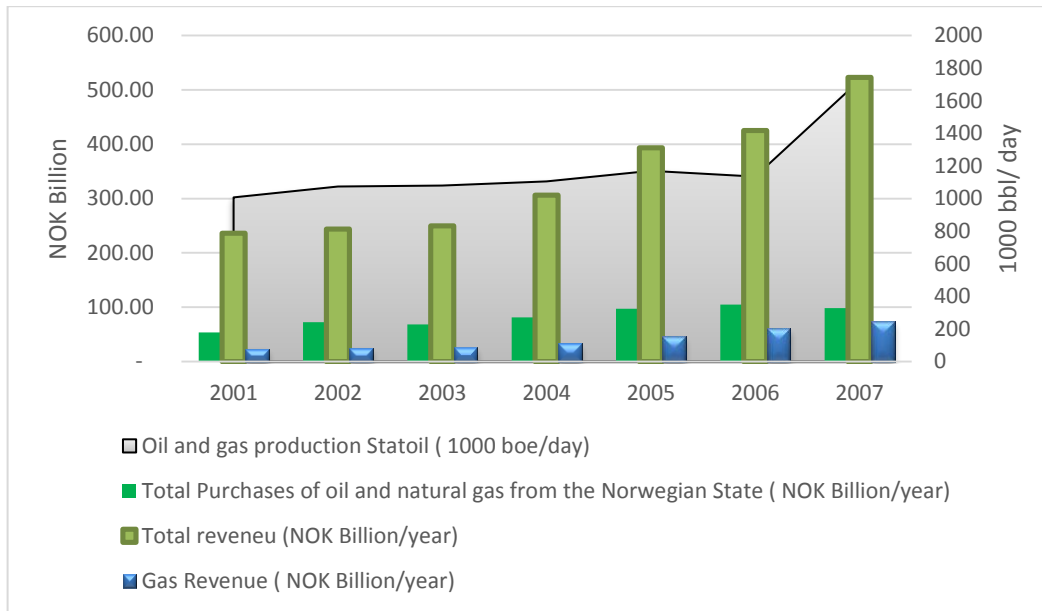
Figure 6 Statoil's Oil production and cost 2001-2007



Source: Own elaboration based on Statoil's Annual reports 2001 to 2007. Taken from (Statoil, 2001a p. 1, 42)(Statoil, 2002 p.1, 59, 67)(Statoil, 2003 p. 1, 27, 65) (Statoil, 2004 p.1, 70, 72)(Statoil, 2005 p. 1, 26 , 64)(Statoil, 2006b p. 1, 28, 64)(StatoilHydro, 2007 p. 2, 6, 87)

History has shown that the demand and offers coverage regulate directly the oil prices, however, sometimes it is not possible to stop the production immediately or find agreements with other nations to regulate the oil production, as a result, massive oil production can fall down the oil prices even in negative numbers (Gorelick, 2011). For some economies centralized in the oil industry or with political and economic problems, overcome that situation has negative repercussions, Figure 7 shows the total and gas revenue of Statoil from 2001 to 2007, in comparison with the total purchase of oil and natural gas from the Norwegian State. It is noticeable that the total revenue increased prominently each year and almost duplicated its profit from NOK 236.34 billion in 2001 (Statoil, 2001a p. Cover page) to NOK 522.80 Billion in 2007 (StatoilHydro, 2007 p. 2), while Oil and gas production remained stable with fluctuations between 1007 thousand boe/day in 2001 to 1135 thousand boe/day in 2006, however, increased significantly the year after, raising an oil & gas production of 1724 thousand boe/day and 831,000 of Oil and NLG production bbl/day during 2007 (Statoil, 2001a p. cover page)(Statoil, 2006b p. cover page)(StatoilHydro, 2007 p. 87-93).

Figure 7 Oil and gas production and revenue 2001-2007

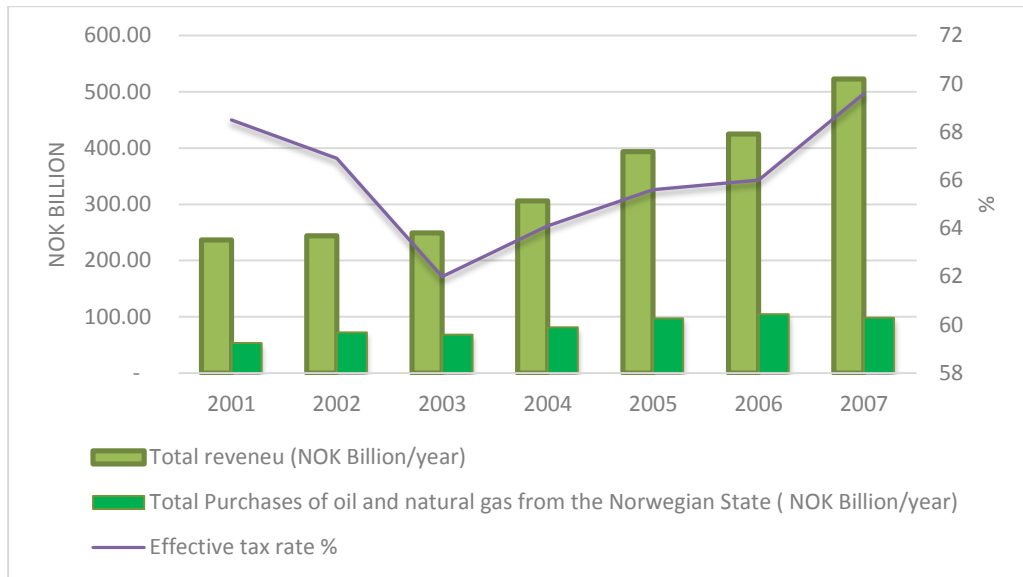


Source: Own elaboration based on Statoil’s annual reports 2001-2007 as follow. Information taken from : (Statoil, 2001a p. cover, 37,53),(Statoil, 2002 p. cover, 70),(Statoil, 2002b p. 37),(Statoil, 2003 p. cover, 36,71),(Statoil, 2004 p. cover, 2, 76),(Statoil, 2005 p. cover, 29, 67),(Statoil, 2006b p. cover, 8,70) and(StatoilHydro, 2007 p. 2, 83, 87,100)

On the other hand, talk about Statoil’s welfare also means talking about Norwegian prosperity. It is due that the Norwegian State is the main shareholder of Statoil which owned 81.7-81.8 % of the company after being privatized in 2001 and 62.5 % of the shares after the merge with Hydro in 2007 (Equinor, 2020b)(StatoilHydro, 2007 p. 110). The StatoilHydro’s annual report 20f 2007 claimed that “*The Norwegian State is the only person or entity know to us to own beneficially, directly or indirectly more than 5% of our outstanding shares*”, which means that the state has the authority to make decisions on shareholders meetings that require the majority of the vote, but the state votes does not have any privilege or right over the decision of other shareholders, only by a majority of shares (StatoilHydro, 2007 p. 138).

However, the relationship between Statoil and the Norwegian State is not complete direct, but it is regulated by the Ministry of Oil and Energy through the State Direct Financial Interest (SDFI), which since 1985 has regulated facilities and investments of hydrocarbons in the production of 214 licenses and 35 fields owned by the Norwegian State (Norwegian Oil Directorate, 2020). This research observed that, the total purchases of oil and gas liquids from the Norwegian State followed the same trend as the Statoil’s total revenue did and duplicated from NOK 53. 29 billion in 2001 to NOK 98.49 billion in 2007 (See figure. 8).

Figure 8 Total Revenue and purchases from the Norwegian State 2001-2007



Source: Own elaboration based on Statoil’s annual reports 2001-2007 as follow. Information taken from : (Statoil, 2001a p. cover, 47-57),(Statoil, 2002 p. cover),(Statoil, 2002b p. 37),(Statoil, 2003 p. cover, 70),(Statoil, 2004 p. cover, 2, 75),(Statoil, 2005 p. cover, 66),(Statoil, 2006b p. cover, 68) and(StatoilHydro, 2007 p. 2, 181)

In comparison the effective tax rate experienced a lot of fluctuations during those years (see Figure. 7), but never decreased under 62%. It is also appreciable that during 2006 the total purchases raised the biggest amount of the period analyzed with NOK 104.62 billion (Statoil, 2006b p. 126), which was due to the high increase of the oil Brent blend barrel from 54.52 USD/ bbl in 2005 to 65.14 USD/ bbl in 2006 (see Table. 1).

Conversely not everything was perfect for Statoil’s economic sustainability, the twins towers terrorism attack of 2001 affected considerably the business markets, creating global instability and a drop of 14% of the crude oil value from 2000 to 2001 (Statoil, 2001a). By contrast during 2002 the Norwegian krone exchange rate with the American dollar was very weak, followed by a global market distress due to the war Iraq and the OPEC oil regulations, consequently, during 2001 to 2002 the Statoil’s total revenue increased only NOK 7.47 Billion and the oil production 67 thousand boe/day (Statoil, 2002a pp. cover pages, 5-6)(Statoil, 2002a p. 5).

The economic sustainability of Statoil during the period of 2001-2007, was also analyzed by external benchmarks such as the Global Reporting Initiative and the principles of the United Nations Global Compact. It is noticeable that Statoil did not use the GRI standards to show its sustainability reports properly until they merge with Hydro in 2007. However, since 2002 Statoil reported in accordance with the GRI structure

following the main elements of the benchmark but not reporting directly to them due that they did not have the reporting system during those years (Statoil, 2002b p. 67). While for the other side Hydro used the G4 mining & metals sector supplement and certain G4 Electric Utility Sector Supplement GRI standards since 2003(Hydro, 2019). The analysis of the sustainability reports from 2002 to 2006 shows that Statoil did not disclose the information of list of stakeholders, contact person for the reports, significant changes in structure, shareholder's communication, suppliers, political contributions and security practices in agreement with the GRI Index structure during those years. But the sustainability reports clearly expressed the economic standards of the GRI G3 benchmark in the aspects EC1-2, EC5, EC6-7, EC8, 10, 12, and EC 13 related to customers, employees, providers of capital, and indirect economic impacts in that order. By contrast on 2007, the Statoil's sustainability report "Going north" finally accounted in agreement with the GRI G3 parameters and raised a score of B (StatoilHydro, 2007b pp. 2, 40-42).

Conversely, Statoil's sustainability has been analyzed by other benchmarks, such as the Global Compact Self-Assessment Tool (GCSAT), the Dow Jones index, and the FTSE4Good Index. Firstly, Statoil reported to UN Global Compact since July 26, 2000, however, was not until 2003 when its sustainability report appear on the communication progress of the UNGC, with a coverage of 5 of the 10 UNGC Principles, the numbers 1,6,7,8,9(UN Global Compact, 2020a) (United Nations Global Compact, 2004). UNGC claims that Hydro reported to the communication on progress since July 26, 2000, the same day that Statoil, however, this information is no clear due that UNGC doesn't explain if it is due to the merge with Statoil or just a coincidence of both enterprises. By contrast, the first Hydro's report available on the web page of UNGC is to report 2004 when the company successfully covered the 10 principles(United Nations Global Compact, 2020c)(United Nations Global Compact, 2005a). During the same year in 2004, Statoil satisfactory covered the 10 principles for the whole period analyzed until 2007, with the exception of 2006, which information was not found on the UNGC's and Statoil's web pages. Secondly, was during 2002 when Statoil was eligible by the Dow Jones index as one of the most sustainable hydrocarbons industries and the year after for the FTSE4Good Index (Statoil, 2002b p. 43).

4.4 Merging sustainability and business towards economic fluctuations 2007-2015

The merge of Hydro and Statoil brought interesting financial and structural changes for both companies in terms of sustainability and sustainability reporting that ranked them as the most powerful company of the Norwegian continental shelf with 82 % of the Norwegian oil production and the most attractive Norwegian employer for young professionals after the merge in 2007 (Institutt for arkeologi, konservering og historie, 2016 p. 12) (StatoilHydro, 2007b p. 32). However, combine two massive corporations with differences in structure, sustainability perceptions and finances also carry some changes in their name, company structure, operations, and sustainability reporting.

Firstly, after the merge both companies Statoil and Norks Hydro decided to rename the company as StatoilHydro on October 2007, but they changed back to Statoil on November 2009 (Equinor, 2020a)(Statoil, 2009 p. 10). Secondly, the acquisition of North American Oil Sands Corporation (NAOSC) in Alberta Canada open a whole window of expansion in the North American trade, but also environmental and structural controversy (StatoilHydro, 2007b). Aniela Szumilas and Inger Stensaker claim that the acquirement of NAOSC and the new structure and weight of StatoilHydro created insecurities for the Canadian stakeholders and managers that interpreted the presence of the Norwegian company as a difference of interest and plans between Canadians and Norwegians business (Szumilas & Stensaker, 2009 p.21). Third, the structural and business changes between Norway and Canada also was experienced with the separation of Statoil fuel & retail in 2010 as an independent company with Statoil as a main shareholder (Statoil, 2010b p. 89).

The merge of Hydro and Statoil and the separation of Statoil Fuel & Retail also carried some variations in the employees and business structure of Statoil. In 2006, Statoil's had 25,435 employees and reached 29503 in 2007 after the merge (See Table. 3), StatoilHydro was present in 40 countries until 2009, with the business and operations spreading out to Cuba, Tanzania, Morocco, and India. Though, During 2007 the going north annual Statoil's report did not mention operations in Mozambique, but it returned in 2008 with the implementation of representative offices in Turkmenistan but stopped in Morocco and Jordan in 2009 (Statoil, 2006b p. 9)(StatoilHydro, 2007b p. cover page)(Statoil, 2009 pp. 49, 55, 82). By contrast, the worldwide presence of Statoil was very strong in 2010, with representation in 42 countries and 30, 344 employees due that Statoil implemented crude terminals in the Bahamas, and the business sales and rights acquisition of the 10% production of the Pernis refinery operated by Shell (Statoil, 2010a pp. 64, 72, 73, 86).

Table 3 Economic performance 2007-2015

YEAR/ INDICATOR	OIL FOUND		EMPLOYEES		REVENUE	ECONOMIC GROWTH	EFFECTIVENESS	
	NGPF market value (NOK Billion)	Norway's GDP (NOK/Billion)	Total Permanent Employees	Statoil Fuel & Retail Employees	Total revenue (NOK/Billion)	Oil and gas production Statoil (thousand boe/day)	Total Purchases Oil&NGL NOK Billion/year	Effective tax rate %
2007	2019	2350	29503	N.S	522.80	1724	98.4	69.59
2008	2275	2607	29500	N.S	656	1925	112.6	76
2009	2640	2428	28739	N.S	465	1962	74.3	84.6
2010	3077	2591	30,344	10,400	529.6	1888	81.4	72.5
2011	3312	2793	31,715	10,385	670.2	1850	95.5	63.3
2012	3816	2964	23028	N.S	723.4	2004	96.6	66.4
2013	5038	3071	23400	N.S	637.4	1940	92.5	71.7
2014	6431	3141	22516	N.S	622.7	1927	86.4	79.9
2015	7475	3111	21581	N.S	482.8	1971	60	100

Source: Own elaboration based on the Statoil's Annual and sustainability reports. Taken (StatoilHydro, 2007a pp. 2,6,87,89,181,211), (StatoilHydro, 2007b pp. cover page, 16), (StatoilHydro, 2008a pp.4, 7, 103, 193, 220), (Statoil, 2009 pp. 5,8, 104,113),(Statoil, 2010 pp. 5, 9, 117),(Statoil, 2011 pp. 5, 10, 117, 122),(Statoil, 2012 pp. 4, 66,151, 178,195), (Statoil, 2014 pp.4, 64, 71,189)(Statoil, 2015 pp. 7, 73, 186)(Statoil, 2014b p. 27) (Statoil, 2015b p. 39) (Statoil, 2016 pp.7, 69, 186) and the data base of the Norwegian Petroleum Directorate available on (Norwegian Petroleum Directorate, 2020a)

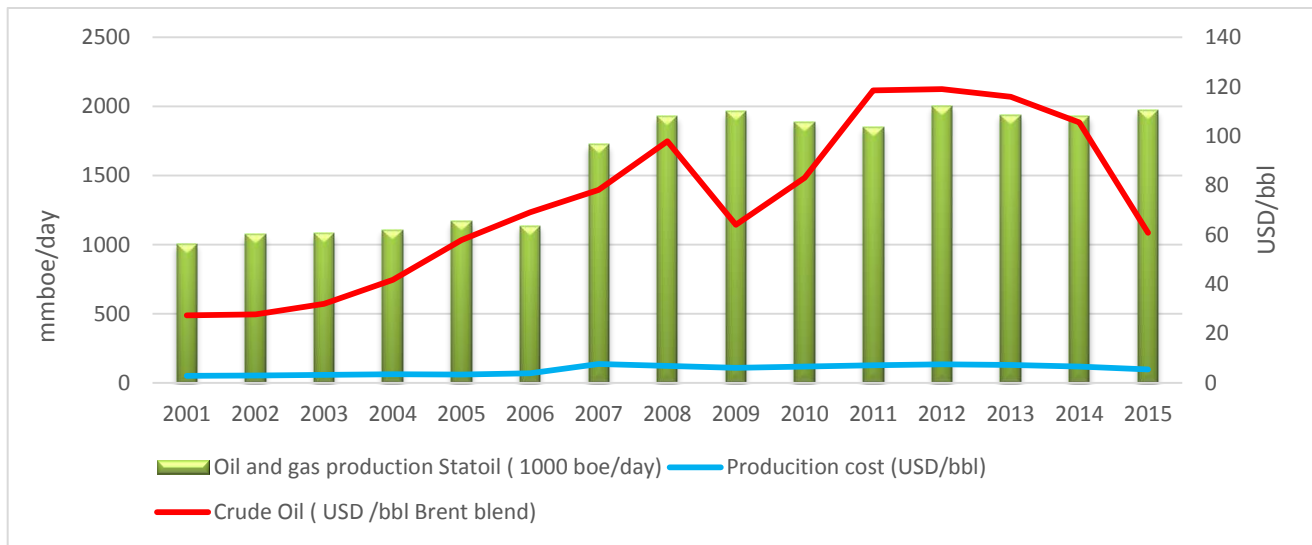
The separation of Statoil Fuel & Retail in spring 2010, also meant that 10,400 Statoil's workers became Statoil Fuel & Retail's workers in 2010, which numbers remained stable as 10,385 workers on 2011. As a result, the workforce of Statoil experienced an important reduction and relocation from 30,344 workers at the beginning of 2010 to 23,400 and 21,581 in 2011 and 2015 respectively (Statoil, 2010a p. 86)(Statoil, 2011 p. 10),(Statoil, 2016 p. 13). Nonetheless, this employee's reduction was also due to the changes in business and operations abroad. For example, in 2013 the Annual Report on Form 20-F informed business only in 33 countries by comparison of the 42 countries reported in 2010, the annual report did not specify clearly which the causes and countries were the operations stopped, however, the analysis of the years after, reveal that in 2012 Statoil closed its office at Tehran Iran due to some social and legal irregularities that will be discussed in the chapter number 4 related to the governance of the company (Statoil, 2014a p. 12).

Another important change in Statoil operations after the merge was production. The SNF Report No 25/09 by Szumilas and Stensaker suggested that both enterprises estimated that their production together could reach 1.9 mmboe/day (million barrels of oil equivalent) of oil production after the merge (Szumilas & Stensaker, 2009 p. 1). By contrast, the development of this thesis analyzed the combined oil and gas production in thousand boe/day and found that the oil and gas production of Statoil definitely increased, but only 589 thousand boe/day after the merge from 1135 thousand boe/day to 1724 thousand boe/day from 2006 to 2007 respectively (See Table. 3 and Figure. 9). However, during the period analyzed is noticeable that in 2012 Statoil reached its maximum oil and gas production in 2004 thousand boe/day that represents an increase in 869 thousand boe/day since the merge in 2007(Statoil, 2006b p. 1),(StatoilHydro, 2007a p.2),(Statoil, 2012 p. 4).

The Figure 9, Table 3 and the thesis analysis also reveal, that the economic crisis of 2008 affected considerably the hydrocarbons sector, but how that crisis affected the Norwegian welfare and Statoil's financial sustainability? Just one year after the merge of Statoil with Hydro the world economy experienced a serious financial economic depression that developed serious problems for the global GDP grow an weakness on the hydrocarbons and electric markets (StatoilHydro, 2008a). This crisis was mainly experienced in US, which represented almost a quarter of the consumption of oil worldwide in that year. With the decrease in the oil consumption, the market instability and the lack of investments, the oil prices and production suffered some fluctuations, in first instance the OPEC held nearly 80% of the total reserves in 2008, while in another hand the Brent Blend crude oil prices that dropped considerably from 91USD/bbl in 2008 to almost the half

price of 58 USD/bbl in 2009 (British petroleum, 2009 cited by Olimb & Ødegård, 2010 pp. 5-6) (StatoilHydro, 2008 pp. 155)(Statoil, 2009 p. 12).

Figure. 9 Production thousand barrels of oil equivalent per day, cost and oil Brent blend price 2001-2015



Source: Own elaboration based on the Statoil’s Annual and sustainability reports. Taken from (Statoil, 2001a p. 1, 42)(Statoil, 2002 p.1, 59, 67)(Statoil, 2003 p. 1, 27, 65) (Statoil, 2004 p.1, 70, 72)(Statoil, 2005 p. 1, 26 , 64)(Statoil, 2006b p. 1, 28, 64) (StatoilHydro, 2007a pp. 2,6,87,),(StatoilHydro, 2007b pp. cover page), (StatoilHydro, 2008a pp.4, 144,155), (StatoilHydro, 2009 pp. 5,117),(Statoil, 2010 pp. 5, 164-169),(Statoil, 2011 pp. 5, 118),(Statoil, 2012 pp. 4, 104), (Statoil, 2014 pp.4, 102)(Statoil, 2015 pp. 7, 102) (Statoil, 2016 pp.7, 56)

This thesis analysis found that even throughout the global recession the StatoilHydro’s oil and gas production remained stable, even years after with some fluctuations from 1925 thousand boe/day in 2008 to 1971 thousand boe / day in 2015 with a maximum pick of production of 2004 thousand boe/day in 2012 (StatoilHydro, 2008 pp. 4)(Statoil, 2009 p.5)(Statoil, 2012p. 4) (Statoil, 2016 p.7). By contrast, the recession affected the Norwegian economy, and it was reflected in its GDP suffered which suffered a small slump from NOK 2607 billion in 2008 to NOK 2428 billion in 2009, however it recover through the years reaching NOK 3111 billion in 2015 (Norwegian Petroleum Directorate, 2020).

Without a doubt, one sector very high affected during the recession was the stock market and inversions. Ferreira, Pereira, Silva, and Pereira argue that a positive increase in the stock markets can affect the

proportional direction the oil prices but also a negative effect can create negative consequences (Ferreira et al., 2019 p. 5). In agreement with Ferreira *et al.* this historical analysis found that the Blend Brent oil prices were affected by the recession, however, this did not affect the oil and gas production of Statoil dramatically. By contrast, Statoil shares have been listed on the stock exchanges in Oslo and New York since 2001, but in 2008 the Oslo Stock Exchange decreased 25.2 % and it was valued with NOK 750 billion less than in 2007 (Oslo Børs, 2008). It is clear why the Oslo Børs 2008 report informed that StatoilHydro fell 17 % and approximately NOK 90 billion in values during September 2008; however, this was not reflected in the financials of the company immediately, which reported NOK 656 billion in total revenue during 2008, but experienced an important decrease in 2009 reaching only NOK 465 billion in 2009, the lowest total revenue experienced since 2006 before the merger (Oslo Børs, 2008) (StatoilHydro, 2008 p. 4) (Statoil, 2009 p.5). Contrastingly, the value market of the NGPF remained positive with a dramatic increase from NOK 2275 billion in 2008 to NOK 7475 Billion in 2015 (Norwegian Petroleum Directorate, 2020).

Even that the enterprise experienced difficulties after the crisis of 2008, the Statoil's and StatoilHydro's reborn as Fenix in terms of sustainability during the period of 2009 to 2013 with a maximum score of A+ by the GRI G3.1 standard during the whole period. Having some no full reports in terms of economic standards such as EC 4 "Significant financial assistance received from government" and EC 5 "Wage level compared with minimum wage at operation location" but being very complete in all the other terms, which represented a big step in reporting for the company in comparison with the previous lack of organizational benchmark reporting experienced before 2006 (Statoil, 2011b p. 29)(Statoil, 2012b p. 49)(Statoil, 2013 p. 35).

On another hand, not only economic factors influences financial sustainability. The Norwegian Ministry of Finance claims that an economy based on hydrocarbons operations, such as the Norwegian economy, is exposed to a financial instability due to a climate risk. In one way hydrocarbons are non-renewable and come from a fossil source, which made them limited; on another hand the regulations imposed for the Paris Agreement in 2015 Article 2 and 4, incited all the nations involved to reduce their GHG emissions to reduce the increase of 1.5°C temperature and climate change repercussions (Ministry of Finance, 2017)(United Nations, 2015a pp. 4- 6). On another hand, Oil and Gas incomes supports the NGPF and consequently the prosperity of Norway, is clear that the Norwegian oil and gas industries can experience negative effects with this regulations (Ministry of Finance, 2017)(Norges offentlige utredninger, 2018p. 26). To avoid that in 2015 Statoil compromised to launched effective climate policies with a reduction target of 60% in its emissions by

2050 and develop prices scenarios with Shell, BP, Eni, Total, and BG group to adjust carbon prices (Carbon Disclosure Project, 2016 p. 10).

4.5 Conclusions

This chapter analyzed *How did the annual and sustainability reports evolve through the Statoil's business and production expansion from 2001 to 2015*, the examination of the annual and sustainability reports showed that external economic factors such as the oil crisis of 2004 and the economic recession of 2008 affected considerably the production and total revenue of the enterprise, while the administrative changes such as the merge with Hydro in 2007 and the separation of Statoil fuel & retail in 2010 altered considerably the structure and worldwide presence of the company, but also in the specific case of the merger, made the company stronger in terms of oil and gas operations and sustainability reporting.

The analysis of oil prices and production fluctuations showed, that what made an enterprise sustainability stable is not an extreme production or very good profit. What made a company economically sustainable is its management, cooperation, alliances, business value creation but also investments in human capital (Statoil, 2006 p. 8). The subchapter "Norway, Statoil and the overcome of Paradox of plenty" exposed the importance of the participation of the state as a supervisor and shareholder for the consolidation of a young enterprise, also that the importance of the social and political rules of a nation and how they interfered with the operations of an enterprise in their own or host country. The analysis of the three subchapters suggest that the stop into the international operations was mainly experienced during 2010 to 2013, and was due to contracts irregularities and problems in conflict zones of the host countries.

The period of 2001-2007 before the merger is strongly characterized by income fluctuations, production stability, and increase of production cost but also by external factors such as the increase of oil Brent Blend prices and the oscillations of the Norwegian krone exchange rate vs dollar. However, the analysis exhibited that Statoil managed correctly its business and overcome the oil production reduction of 2004 without a crisis. Also, the increase of oil Brent Blend prices favored Statoil's business specifically since 2005, though, they were a little affected by the weak exchange rate. By contrast, this research found that 2003 was one of the hardest years for Statoil with a very small effective tax rate of 62 % and a short increase of the oil and gas production in 6 thousand boe/year in comparison with the year before (Statoil, 2003 p. 70). Nevertheless, was

in the same year when Statoil was qualified as one of the most sustainability oil and gas enterprises by Dow Jones index and FTSE4Good Index (Statoil, 2002 b p. 43). In terms of numbers, it is also appreciable that the performance of Statoil during 2007 and after the merge with Hydro in October 2007, was the best during this period since the implementation of the sustainability reports in 2001. This performance is very remarkable in the total revenue and total purchases Oil&NGL that almost duplicated their values during those 7 years, but also in the Oil and gas production that increased in 717 thousand boe/day in contrast with the production of 2001.

On another hand, the period of 2007- 2015 is characterized by many administrative and operational changes worldwide. It is clear that the merger of Statoil with Hydro reinforced the structure of the company and collocates it as one of the main Hydrocarbon's Company of the Norwegian continental shelf, thanks to that, the oil and gas production, was able to almost duplicate its rates from 1007 thousand boe/ day in 2001 to 1971 thousand boe/ day in 2015, with an important upgrade after the merge, which also made the company stronger to support the struggles of the economic crisis of 2008 (Institutt for arkeologi, konservering og historie, 2016 p. 12)(Statoil, 2011a p. 5)(Statoil, 2016 p. 7) . On the other hand, 2009 was the hardest year to overcome for the company due to the struggles of the economic crisis of 2008, but also influenced by the preliminary changes involved with the separation of Statoil Fuel & retail specifically in the workforce. It is clear that the company followed a dropping trend in the number of employees after the separation, reached a total of 23028 employees in 2011 that is even lower than the number of 23899 employees that the enterprise had in 2004 before the merge (Statoil, 2011a p. 10) (Statoil, 2004a p. cover page).

In terms of external reporting it is clear that Statoil had not enough experience in the first years to report in agreement with UNGC and GRI , however, the company made an excellent progress during the following years and was able to achieve under the GRI G3 parameters a score of B+ in 2007 with a clear progress after the merger that allowed the enterprise to achieve an A+ for four years consecutively in 2009 to 2013 (StatoilHydro, 2007b pp. 2, 40-42) (Statoil, 2011b p. 29)(Statoil, 2012b p. 49)(Statoil, 2013 p. 35). Finally, the new regulations of the Paris agreement and the Sustainable development Goals of 2015 represent a new challenge for Statoil to follow in the best sustainability way as possible, however, the reports showed that the enterprise was compromised to follow them.

CHAPTER V: GOOD GOVERNANCE, CSR, HUMAN AND LABOR RIGHTS TO BUILD SUSTAINABILITY 2001-2015

You have to look at history as an evolution of society. Jean Chretien taken from: (Demakis, 2012 p. 49)

5.1 Introduction

The energy transition and the sustainable development resolutions of the Millennium Development Goals on September 18 of 2000 brought changes to the policies and operations to the oil and gas industry globally in terms of human rights. In one way, the MDGs claimed the need to eradicate extreme poverty, achieve universal primary education, promote gender equality, and generate global partnerships for development (United Nations, 2015b pp.4-7). While in another hand the United Nations Millennium Declaration recognized 6 fundamental values to promote sustainable development between nations, enterprises and civil society; they were Freedom, Equality, Solidarity, Tolerance, Respect for nature, and shared responsibility (United Nations, 2000 p. 2).

During its history the hydrocarbons industry has been involved in controversy of how their practices deteriorate the environment and which has been the positive and negative social and political consequences (Koolwal & Khandelwal, 2019 p. 1). In one way business, such as oil and gas manufacturing have created thousand of jobs worldwide trough their business expansion, contributed with spin-offs and local development , but in another hand those business can drive conflict of interests in host countries, displacement of local activities by oil and gas extraction, and abuse of human and labor rights (Bergquist, 2017 p. 2) (Koolwal & Khandelwal, 2019 pp. 2-4). However, those effects are also influenced by the political situation of the host countries, their laws and the arrangements than the hydrocarbons industries and their partnes have in those areas (Institutt for arkeologi, konservering og historie, 2016 p. 12).

As a result, the goal of this chapter, is analyze the reporting system of the annual and sustainability reports of Statoil, trough the discussion of 9 social and management indicators such as human rights, poverty and education, partnerships, labour, employees, gender equality, discrimination, responsibility, corruption and transparency. The justification of this examination is based on the need to analyze how the social, governance and political factors (internal and external) experienced between 2001 to 2015 affected the reporting of Statoil. but also check if Statoil integrated the social principles of the sustainable development into its operations and guidelines .

5.2 Building a reputation, human rights and corporate responsibility 2001-2007

The analysis of the Chapter number 4 revealed that economic factors, good governance and investments in human capital favored the welfare of Norway and Statoil, but how exactly those factors favored the socio-political sustainability reporting of the enterprise from 2001-2007. The first indicator analyzed was the human rights factor, the methodology used was through an adaptation of the GCSAT In agreement with the indicators HU.4 and HU.5. A, that analyze the community impacts and product stewardship respectively (United Nations Global Compact, 2020d). It is appreciable that during 2001 Statoil made an important step in terms of humanitarian assistance and partnership through alliances with the Red Cross, the Norwegian Refugee Council, Amnesty International Norway and the United Nations High Commissioner for Refugees (STATOIL, 2001 p. 25).

The Millennium Development Goals number one and two, called the world to take actions to eradicate extreme poverty and hunger, and achieve universal primary education (United Nations, 2015b p. 4). However, how the Statoil as an oil and gas enterprise contributed to achieving those goals? Some authors such as Nikhil Koolwal and the Dr. Shilpi Khandelwal recognize the important role than hydrocarbons industries have played in terms of corporate social responsibility, through mechanisms such as subsidies and networks in co-collaboration with other agencies, such as United Nations Development Program (UNDP) , the US Agency for International Development (USAID) and NGO's to create local investments and schools in host countries(Koolwal & Khandelwal, 2019). In another hand, in comparison with the indicators of the GCSAT HU4.A and HU 4.C which are focused on community impacts of a company through the evaluation of community engagements and property rights (UN Global Compact, 2020a), this master thesis found that the social assistances of Statoil were dedicated on local spin-offs in host countries and social educational programs as follow.

Statoil cooperated firstly, supporting the Norwegian Refugee Council (NRC) and the Norwegian minister of foreign affairs, the company donated US 83,000 to construct training centers of education and US 150,000 to build houses and agriculture project for internally displaced people and 150 repatriated families from refugee camps in collaboration with Red Cross and NRC during 2002-2003 (Statoil, 2002b). Secondly, Nigeria has received Statoil's funds since 1997 with the project in Akassas to eradicate poverty and build local capacity, and the fatis village in Algeria received support with water suppliers in 2006 (Statoil, 2005a p. 63) (Statoil, 2006a p. 42). Thirdly, Statoil also contributed with education and training in Norway,

specifically with summer projects in collaboration with Norwegian Universities such as the Norwegian University of Science and Technology and Sør-Trøndelag University College since 1998 and achieved the participation of more than 80 students in 2004 (Statoil, 2004a p. 18). As a result, due to its contributions, Statoil received the World Petroleum Councils prize for social development and human rights contributions in Akassas Nigeria during 2005 and the enterprise was cataloged as the most attractive employer for students and young professionals in Norway after the merge with Hydro in 2007 (Statoil, 2005a p. 4)(StatoilHydro, 2007b p. 32).

On another hand, hydrocarbons industries can contribute to sustainability through job creation, labor rights, and equal opportunities for women and men into the labor market. Though, ensure those parameters in a global market had been not an easy task, Koolwal and Khandelwal claim that embrace corporate responsibility and respect for labor standards has been one of the biggest challenges for oil and gas industries operations in host countries, this is due of the lack of regulations, states normativity, minimum age and other principles stipulated by ILO standard 119 of a sustainable enterprise, such as freedom of association, non-child labor and human rights (International Labour Organization, 2007 p.77) (Koolwal & Khandelwal, 2019).

The indicators number 3 “Labour”, 4 “Employees” and 5 “Gender equality” analyzed in this thesis, were collected in the Table. 3 and Figure.9, which show that the trend of the company was the job expansion in more than 12817 new employees from 2001 to 2007, however, the job satisfaction decreased from 5.1 to 4.6 during the same period of time (Statoil, 2001b pp. 35, 39, 43) (Statoil, 2006a p.21) (StatoilHydro, 2007b pp. 1, 32- 39). It is clear than the Statoil job expansion was mainly due to the business and operations enlargement abroad. Consequently, the foreign and employees abroad almost duplicated from 5901 to 11401 in 2007. Though, the merge with Hydro also increased the total employees from 25435 in 2006 to 29503 in 2007, unfortunately, the reports did not specify if those 4,068 new employees came from the merge with Hydro or were due to the expansion of Statoil to Canada, Cuba, Mozambique, Tanzania, Morocco and India, the sustainability report 2007 “Going North” only specified that 124 of them worked at Canada (Statoil, 2001b p. 43) (StatoilHydro, 2007b 39).

Table. 4 Statoil’s job development and gender equality

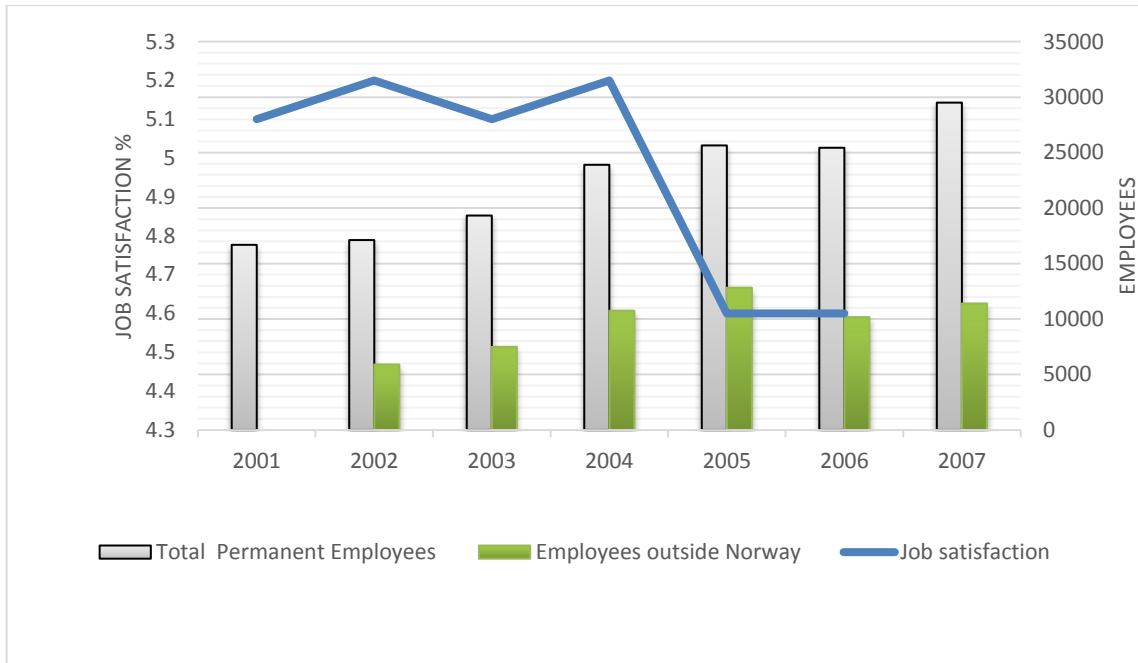
Year / Indicator	<i>Employees</i>		<i>Gender Equality</i>		<i>Labour</i>	
	Total Permanent Employees	Employees outside Norway	Women workforce %	Women manager positions %	Job satisfaction	
2001	16686	No reported	27	15	5.1	
2002	17115	5901	31	23	5.2	
2003	19326	7491	32	19	5.1	
2004	23899	45%	27	26	5.2	
2005	25644	50%	No clear information		4.6	
2006	25435	45%	No reported	26	4.6	
2007	29503	11401	35.2	26	No reported	

Source: Own elaboration based on Statoil’s Annual and Sustainability reports 2001-2007. Information taken from (Statoil, 2001b pp. 35, 39,43) (Statoil, 2002b pp. cover, 37, 55-57) (Statoil, 2003b pp. 36, 54) (Statoil, 2004a pp. cover, 15) (Statoil, 2004b p. 36) (Statoil, 2006a pp. 9,21) (StatoilHydro, 2007b pp. cover, 32, 39).

Norwegian workers also increased their participation into Statoil from 11,214 in 2002 to 18,102 workers in 2007 with a representation of more than 70% of the total staff into labor unions since 2002 and the collaboration with the International Federation of Chemical, Energy, Mines and General Workers Unions (ICEM) since 1998 (Statoil, 2002b pp. 37, 58) (StatoilHydro, 2007b 39). By contrast, the job satisfaction followed the opposite trend (See Figure. 9), with a lot of fluctuations between 5.1 to 5.2 points until 2004 but with a clear shrinkage after that year, the reasons were not clearly reported, nevertheless during 2005 Statoil left evident that EU’s internal job market unbalance affected workers to keep longer and more stable contracts in their own countries, which also affected the relations between Statoil and its contractors to find qualified people and made stable contracts abroad that did not follow the Norwegian regulations (Statoil,

2005a p. 16). In addition during 2007, the recruitment process was partially stopped due to the integration and relocation of the new staff product of the merge of both companies (Statoil, 2002b p.58) (StatoilHydro, 2007b p. 32).

Figure 10. Statoil employees and job satisfaction



Source: Own elaboration based on Statoil’s Sustainability reports 2001-2007. Information taken from (Statoil, 2001b pp. 35, 43) (Statoil, 2002b pp. cover, 37, 57) (Statoil, 2003b pp. 36) (Statoil, 2004a pp. cover, 15) (Statoil, 2006a pp. 9,21) (StatoilHydro, 2007b pp. cover, 39).

The declaration of the Millennium Development Goals point 3 section h and the MDGs 3 claimed the need to integrate women participation to implement economic and social policies to increase the development in marginated regions (United Nations, 2000 p. 2). This thesis found that Statoil followed that point and contributed with the reduction of gender inequality into the enterprise with an increase from 27 % of the women in the total workforce in 2001 to 32.5 % in 2007 after the merge with Hydro (Statoil, 2001b p. 39) (StatoilHydro, 2007b p. 32). But also with achievements such as the fundraising to the Azerbaijan’s first crisis center to help women in 2002 and the patronage to avoid violence against women in Venezuela in 2004 (Statoil, 2002b p. 41)(Statoil, 2004a p. 60). Therefore Statoil contributed with the development of the MDGs number 3 “Promote gender equality and empower women” internally and also trough programs and donations abroad.

On another hand, the social and governance indicator number 6 " discrimination" was evaluated in agreement with the MDGs 6 "Combat HIV/ AIDS, Malaria and other diseases" and the ILO 's requirements. This indicator showed that Statoil did not contribute to cover the immunization against these diseases, however, the corporation improved nondiscrimination and health policies for those workers infected. For example, during 2002 the Statoil's policies included programs, partnerships, and confidential testing for all of those employees that required the services, also the guidelines encouraged aspects of non-discrimination and support (Statoil, 2002b p. 9). While in 2005 the corporation created campaigns of prevention of malaria and the duty doctor system (Statoil, 2005a p.22).

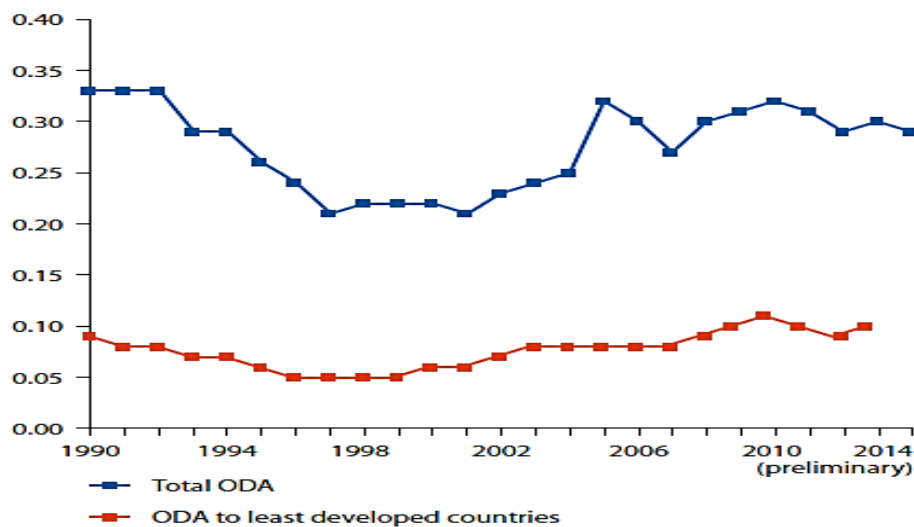
However, discrimination comes in many forms, for sexual preferences, gender, race, diseases, and economic differences, as a result, the promotion of sustainable enterprises of the 96th ILO conference of 2007 stipulates that is the obligation of a corporation to promote respect, good labor management, and non-discrimination guidelines and appropriate work environment to its employees (International Labour Organization, 2007 p. 15). To analyze those aspects the indicator number 7 "Responsibility" was based on the ILO standards and the HU.1. A "Health and safety" and HU.6.A "human rights in country of operation" indicators of the GCSAT. In accord with them, Statoil had big challenges with the Snøhvit project implemented in the Barents Sea, due to NGOs protest and conflict of interest with the local indigenous Sami people, due to the controversy of how this gas project could affect the arctic ecosystem and the fishing extraction of the region (Statoil, 2002b p.31). Finally, in 2002 the project began, with a great development that carried nearly NOK 600 million in contracts, however also carry environmental problems for an engineering problem in the pressure flare that generated massive carbon emissions (StatoilHydro, 2007b pp.14, 18)(Statoil, 2002b pp.31-32). On another hand, tragedy also hit Statoil in 2004 with 3 fatalities at the Iran's South Pars development, several accidents at the platform of Snorre and Mongstad refinery in 2004 and another 3 fatalities more in the Gulfaks field and Mongstad in 2007(Statoil, 2004a p. 23)(StatoilHydro, 2007b p. 17).

Furthermore, Statoil has shown to be a responsible corporation in terms of social responsibility, ethics, and health and safety. Using mechanisms such as the Ethic helpline implemented in 2002 as a tool to provide assistance, information, and support for any kind of issue related to harassment, discrimination, and abuse of human and labor rights. But also introducing the local community into the decision making through the Voluntary principles on Security and Human Rights (VPSHR) guidelines implemented in January 2003

(Statoil, 2002b pp. 15, 44). On another hand, since 1997 Statoil motivated their managers, teams, and employees to improve a great performance in health, safety and environment through the chief executive’s HSE prize, but also with programs such as the save behavior program coursed by 28,000 employees in 2006, the use of the Annual working environment and organization survey “Amou” and with risk assessment tools (Statoil, 2003b p.59) (Statoil, 2005a pp. 22- 24).

The Millennium Development Goal number 8 “Develop a global partnership for development” recognized the importance of working together to achieve the other seven MDGs, and the official development assistance (ODA) has been one of the most important mechanisms to support the developing countries (United Nations, 2015b p. 63). This assistance had an upsurge during the period of the implementation of the MDGs specifically in OECD countries, while the partnerships and the participation of oil enterprises such as Statoil had played an important role in it succeed. For example the Figure. 10 taken from the MDGs report 2015 shows how the ODA participation experienced a lot of fluctuations during the '90s. However, it increased considerably after the implementation of the MDGs in 2000 and prominently during 2006(United Nations, 2015b p. 63). In addition, the Development CO-cooperation report 2009 claimed that during 2007 the Norwegian ODA reached USD 3.7 billion with a commitment to reach close to 1% of their GDP value in ODA for the future years (OECD, 2009 pp. 126-127).

Figure 11. Net official development assistance from OECD-DAC countries as a portion of donor’s gross national income 1990-2014 (percentage)



Source: Millennium Development Goals report 2015 (United Nations, 2015b p. 63)

Though, how Statoil implemented its partnerships to contribute to the sustainability of the company and sustainable development. Well, in agreement with the AC.2.A “Joint actions” indicator of the GCSAT, the key to good management is with transparency, anticorruption standards, and engagement with other organizations and enterprises (UN Global Compact, 2020c). Following those premises, the indicator number 8 “Partnerships” of this research found that the governance of Statoil has been based on a tri-sector partnership model with a special collaboration with Red Cross, NRG, Amnesty International Norway, UN High Commissioner for Refugees since 2001, but also with the support of the Business Leaders’ Initiative on Human Rights (BLIHR) in collaboration with ABB, Hewlett-Packard, Novo Nordisk, Gap and the body shop international since 2004 (Statoil, 2001b p. 65)(Statoil, 2004a p. 51,59). While in terms of technological improvements and operations teamwork the most remarkable associations experienced during this period were with Northwest power system (US) and Methanex (Canada) in 2001, and the agreements between the Snøhvit Industry Association, stakeholders and local community during the establishment of the Snøhvit project in 2002 (Statoil, 2001b p. 57)(Statoil, 2002b p. 31). On another hand, partnerships can protect the ecosystem and prevent environmental problems caused by operations, Statoil knew that and they collaborate with the Conservation of Clean Air and Water in Europe (CONCAWE) during 2006 to study GHG and motor fuel emissions to generate technological improvements and solutions (Statoil, 2006a p. 44). And with the UN Environment Programme’s World Monitoring Centre (UNEP-WCMC) in terms of biodiversity conservation and stronger operation guidelines following the IPIECA and the Proteus program since 2003 (Statoil, 2003b p. 23).

Without a doubt, to build strong partnerships and a reliable reputation, an enterprise needs guidelines based on transparency and unfailing relationships. On the same wavelength with the AC. 1.A “Signaling a non-corrupt environment” standard of the GCSAT, this research evaluated Statoil history through the indicator number 9 “transparency and corruption”, and found that one of the main preoccupations of the company during 2001 to 2007 were found transparent contractors, avoid illegal information brokers and fight corruption in their host countries operations (Statoil, 2001b p. 25) (Statoil, 2003b p.5). For example, Statoil suffered big challenges in Azerbaijan to implement business, due to the socio-political changes experienced during the governmental organization of the new country (Statoil, 2002b p. 43). By contrast, other oil companies also suffered similar problems in host countries, such as the Royal Dutch Shell Company case in Nigeria, Cayford claims that the company suffered struggles due to the more than 3,000 oil spills in Ogoniland from 1958 - 1991, but also because Shell experienced the independence transition of Nigeria, that

carried political problems and lack of regulations that favored the corruption by the state and affected the reputation of the enterprise (Cayford, 1996 cited by (Moses & Letnes, 2017).

From 2001 to 2007 Statoil, experienced reliability problems due to 2 controversial cases, the Horton case in Iran during 2002 and the illicit contracts in Libya after the merge with Hydro in 2007. The first one was due to the illegal payments to ensure commercial advantages in Iran by influence foreign public employers with the company Horton Investments Ltd., which actions violated the Norwegian penal code 276c paragraph b and was considered as an Economic and Environmental crime “ Økokrim “ until its conclusion case in October 2006. The consequences were serious for the reputation of the company, in the first instance, the chief executive vice president for International Exploration & Production quit in 2003, moreover, Statoil paid a penalty of NOK 20 million and lost the contract of USD 15.2 million invested since 1991 in Iran (Statoil, 2004b)(Statoil, 2003b p. 11)(Statoil, 2006a p. 13). But also Statoil lost credibility with its investors and points in ethic and governance with the Dow Jones index, is untestable why Statoil could not cover the principles 2, 3, 4 and 5 of UNGC, specifically the number 2 “make sure that they are not complicit in human rights abuses” and the principle 4 “the elimination of all forms of forced and compulsory labor” (Statoil, 2003b p. 41) (United Nations Global Compact, 2004)(United Nations Global Compact, 2020d)..

Secondly, one of the most controversial corruption cases during the Statoil history was the product of the merge with Hydro in 2007 and was related to the exploitation and operation contracts in Libya, which was label as illicit and review by the Sidley Austin LLP (StatoilHydro, 2007b p. 17). As a result to against these situations, Statoil had implement policies based on transparency and anti-corruption, but also contribute with the OGP’s anti-corruption sub-committee of Transparency International since 2001; implemented and an anticorruption training and recruitment in Algeria, Brazil, Russia and Venezuela in 2007; and generate guidelines in agreement and collaboration with the Partnership against corruption initiative (PACI) and Extractive industries transparency initiative (EITI) in terms of company compliance (Statoil, 2002b p.51) (Statoil, 2006a p. 52)(StatoilHydro, 2007b p. 30).

Finally in terms of external sustainability supervision the Dow Jones Sustainability World Index, claimed that the corporate sustainability of Statoil was due to their human and labor rights, value creation, and very structured business planning (Statoil, 2006 p. 8). While in another hand, the GRI and UNGC reported that Statoil followed the tri-sector partnership model to collaborate with human rights but also followed the UNGC principles in terms of stakeholder engagement covering satisfactory since 2003 to 2007 the ten

principles, with the exception that during 2003 the UNGC communication on progress did not report the human principle number 2 and the labour principles 3,4 and 5 as achieved or reported and explained paragraphs above with the Horton case (Statoil, 2001b p. 65)(United Nations Global Compact, 2004).

On another hand, Since July 2000 Statoil has focused its guidelines in agreement with the 10 principles of United Nations Global Compact achieving them gradually. During 2003 the organization completed satisfactorily the principles number 1” Business should respect and protect human rights”, 6 “Eradication of discrimination and respect of employment and occupation”, 7 “Business should support a precautionary approach to environmental challenges”, 8 “undertake initiatives to promote greater environmental responsibility” and 9 “encourage the development and diffusion of environmentally friendly technologies”. However, was not until 2005 that the communication on progress of UNGC announced that the Statoil reports of 2004 have covered the 10 principles (United Nations Global Compact, 2005)(United Nations Global Compact, 2020b) (United Nations Global Compact, 2020e).

5.3 Join forces to ensure human rights towards corruption risks 2007-2015

The merge between Hydro and Statoil brought many opportunities for the company to become the most attractive Norwegian employer and the main oil and gas company of the Norwegian continental shelf (Institutt for arkeologi, konservering og historie, 2016 p. 12) (StatoilHydro, 2007b p. 32). However, the merge also brought reporting structure changes and high controversy in terms of corruption and transparency due to the illegal operation contracts in Libya, with the contractors Sidley Austin LLP, and the socio-environmental controversy of the oil sands project (StatoilHydro, 2007b p. 17) (Statoil, 2014b pp 7, 22). On another hand the separation of Statoil fuel & retail since 2010 and finally the split of reporting in 2012 also developed many changes into the workforce and job satisfaction of Statoil which reached its maximum of 5.2 in the Global people survey, but did not increase more than 4.7 after the merge (Statoil, 2002b p. 56)(Statoil, 2011b pp. 69-73).

On another hand, the ILO convention 96th session 2007 recognizes that sustainable enterprises generate three key impacts into development, 1. Core business activities, 2. Advocacy and dialogue and 3. Social investments (International Labour Organization, 2007 p. 130). In agreement with that Koolwal & Khandelwal claim that invest in local public development projects is a core topic of corporate social responsibility

(Koolwal & Khandelwal, 2019 p. 3). By contrast, the analysis of the sustainability reports through the indicators 1 "Human rights" and 2 "poverty and education", in agreement with the standards HU.4.A and HU.4.C of the UNGC self-assessment tool, reveal that the merge favored the creation of a framework to measure the impact of the company operations in host countries, in terms of human rights violations, anti-corruption, and ethics, all of them in agreement with the constricted host countries regulations that changed after the increase of the oil prices in 2007 (StatoilHydro, 2007b pp. 24-30). But also one of the biggest contributions of StatoilHydro in terms of social investments was the donation of NOK 207 million in 24 countries for social development in education, poverty, and human rights in 2009 (Statoil, 2009b p.30). For example, the enterprise also did big changes in terms of community engagement with local people, specifically with indigenous populations and the education improvements through Angola, Norway Tanzania Higher Education Initiative "ANTHEI" to invest in education for the local community to have access to education in geoscience and petroleum, and the sponsorship of the FIRST "For inspiration and recognition of Science and Technology" LEGO league in Scandinavia (Statoil, 2010b p. 8)(Statoil, 2014b p. 30) (Statoil, 2011b p. 70).

The analysis of the reports based on the indicators number 3 "Labour", 4 "Employees" and 5 "Gender equality" and 6 "No discrimination" show some variations in terms of workforce numbers, job satisfaction and increase of foreigners and woman participation into the business and operations of Statoil. The merge of Hydro with Statoil incremented the workforce of the enterprise in more than 4000 new employees in 2007, which collocates at StatoilHydro as one of the most rentable enterprises of Norway (Statoil, 2006b p. 9) (StatoilHydro, 2007b p. cover page). However, the separation of Statoil Fuel & retail caused an important workforce reduction and relocation of more than 10,400 workers, as a result, the number of employees of Statoil in 2010 of 30,344 workers was reduced to 23,400 and 21,581 in 2011 and 2015 respectively. Even though Statoil was the main shareholder of Statoil Fuel & Retail, but finally, in 2012 the reporting system was split and the Statoil reports did not include the number of Statoil fuel & retail into their reporting again (Statoil, 2010a p. 86)(Statoil, 2011 p. 10),(Statoil, 2016 p. 13).

Furthermore, in agreement with the standard LA.4.A of the GCSAT is clear that the women's participation increased from a representation of 35% in the whole workforce of the company and 26% in the manager positions in 2007 to its maximum during 2010 with a staff representation of 37%. However the separation of Statoil Fuel & retail also represented the diminution of 6% of the women participation into the

enterprise and the percentage remained stable as a 31% of the whole Statoil staff until 2015 (StatoilHydro, 2007b p. 32) (Statoil, 2010b p. 84) (Statoil, 2015b p. 39). On another hand also the permanent jobs of non-Norwegians staff proportions were reduced dramatically from 42% in 2010 to 12.06% in 2015 (2,604 employees) (Statoil, 2015b p. 42) (Statoil, 2010b p. 46). As a result, is clear that the new permanent hires of the enterprise was mainly in Norway and not abroad after the separation of Statoil fuel & retail, however, is also appreciable that the work conditions of those non-Norwegians employees were in agreement with the GRI Standards, which were satisfactorily covered with a score of A+ from 2009 to 2013 in terms of labor standards, however, the lack of reporting in terms of “GRI 3” LA 7” rates of injuries, occupational diseases” was partial cover during those years(Statoil, 2010b p. 128). By contrast, the global people survey also showed that the guidelines of Statoil in terms of non- discrimination were effective, with an average of 5.1 points on a scale of 6 points of satisfaction by the whole Statoil workforce during 2011 to 2015 (Statoil, 2015b p. 38).

The question HU.6.A “¿Does the company seeks avoid involvement in human rights abuses owing to the government or societal practices?” of the GCSAT approach responsibility since a perspective of country risks and human rights violations (United Nations Global Compact, 2020b). While Koolwal & Khandelwal claim that lacks corporate social responsibility can damage the reliability and reputation of a company for many years, such as the cases of ExxonMobil and their environmental impacts, which have linkage the name of the company to wrong environmental sustainability (Koolwal & Khandelwal, 2019 p. 7). This thesis analysis found in agreement with the indicator number 7 “Responsibility” than the sustainability of Statoil has been proved in different scenarios from 2007 to 2015. The most remarkable was during 2013 when 40 persons died during a terrorist attack on January 16 in the Amneas platform in Algeria, which situation put in challenges the security and safety system of the enterprise, which improved as a result in collaboration with the Algerian government military protection in its facility, however, Statoil learned from the tragedy and implemented similar strategies of protection in Mozambique, which operations were safeguarded by the Navy (Statoil, 2013 pp. 3, 27).

On another hand, the reputation of Statoil was also affected by the pressure of the public point of view for the company operations in Alberta Canada after the acquisition of the North American Oil Sands Corporation “NAOSC” in 2007, which was extremely judged by NGO’s and environmental organizations due to the risk of oil extraction from tar sands (StatoilHydro, 2007b p. 13)(Greenpeace, 2011). As a result, the guidelines and sustainability reporting of Statoil in terms of responsibility evolved to accurate those problems. In one

way, Statoil implemented a training incorporate social responsibility plan to covered 80% of the non-OECD Statoil's countries of operations during 2010 and implement safety and security training. Secondly, through the EPRA "early-phase risk assessments" tool Statoil avoided serious environmental disasters as the Deep Horizon accident in the Gulf of Mexico during 2010 experienced by British Petroleum (Statoil, 2010b pp. 3, 45)

In agreement with the indicator "corruption and transparency", and the indicators of the GSAT, AC.1.A "Signaling a non-corrupt environment" and AC.1.B "Anti-corruption risk assessment" is clear than the period of 2007 to 2015 characterized by the resolution of conflicts of the "Horton Case" (United Nations Global Compact, 2020a). Which as was explained in the subchapter above, was a violation of the Norwegian penal code and the US Foreign Corrupt Practices Act, due to illegal payments of foreign public employers in Iran during 2002 by the Sidley Austin LLP contractors enterprise (StatoilHydro, 2007b pp.17,30)(Statoil, 2004b)(Statoil, 2003b p. 11)(Statoil, 2006a p. 13). But finally was closed by the American authorities in 2009 after than Statoil anti-corruption compliance and guidelines evolved during three years to satisfy the requirements, implementing anti-corruption training with its employees and partners, and the assessment in corruption risks (Statoil, 2009b p. 25).

Finally, the UNGC identifies the creation of partnerships as a strategy of sustainability than an enterprise must improve to promote anti-corruption (United Nations Environment Programme, 2020 indicator AC.2.A "Joint actions"). While the MDG 8 claims than partnerships can drive development through social, economical, political and environmental protection engagement (United Nations, 2015c p. 8)The analysis of the sustainability reports through the indicator "Partnerships", reveal than Statoil reinforced its number of partnerships after the merge with Hydro in 2007, being the most remarkable the participation with civil society organizations such as Amnesty international Norway, The International Crisis Group "ICG", the International Federation of Chemical, Energy, Mine and General Worker's Unions "ICEM", the Norwegian Refugee Council "NRC", Norwegian red cross, Transparency International "TI" and Zero (Statoil, 2011b p. 16). But also with Industry associations such as American Petroleum Institute "API", the Canadian Association of Petroleum Producers "CAPP", the Gas Producers "OGP", the International Emissions Trading Association "IETA", the International Gas Union "IGU", and the Clear Air Coalition (Statoil, 2011b p. 17). Such partnerships allowed the enterprise to stabilize methane emissions, develop technology, create social positive spin-offs and contribute with sustainable development (Statoil, 2015b pp. 14-25)

5.4 Conclusions

The analysis of the 9 social and governance indicators showed that Statoil contributed considerably in terms of human rights and social assistances in host countries, but also with the development of education, health and gender equality. As a result is evident that Statoil guidelines contributed with the sustainable development in agreement with the MDGs 1” Eradicate extreme poverty and hunger”, 2” achieve universal primary education”, 3 “Promote gender equality and empowered women”, 6 “Combat HIV/AIDS, malaria and other diseases” and 8” Global partnership for development”.

On the other hand, the Statoil’s response to the 10 principles of United Nations Global Compact and GRI define perfectly the historical challenges and strenghtness that the enterprice experienced in social sustainability reporting. It is clear that during the first years of analysis between 2001 to 2003 the company reporting system had many lacks in structure but not in content; It was due that Statoil applied the standards into its reporting system but not reported in accordance with them until 2004 for the UNGC and 2007 for GRI (Statoil, 2002b p. 67)(United Nations Global Compact, 2004).

However, during the first years, Statoil was able to follow the ILO and UNGC policies through its operations and guidelines, the company fomented gender equality and new job opportunities for foreign, created local spin-offs through investments in host countries, joint forces with social and non-profit organizations worldwide. But also encouraged education and non-discrimination. Which allowed the organization to complete satisfactorily the principles number 1” Business should respect and protect human rights”, 6 “Eradication of discrimination and respect of employment and occupation”, 7 “Business should support a precautionary approach to environmental challenges”, 8 “undertake initiatives to promote greater environmental responsibility” and 9 “encourage the development and diffusion of environmentally friendly technologies”.

The analysis of the sustainability reports reveals, then the lack of reporting and achievement of the UNGC principles 2” make sure that they are not complicit in human rights abuses”, 3” freedom of association”, 4” elimination of all forms of forced labor”, 5” the effective abolition on child labor” before 2003 was mainly due for lack of regulations in host countries. First, the corruption of the Horton case affected the Statoil's reputation very seriously until its resolution in 2009. Second, eradicate the forced child labor in agreement with the ILO regulations was reported for the first time during 2003, before those years the reports were not clear in which host countries people under 15 years labored on the Statoil operations, however, after 2003 the

policies and regulations of Statoil did not allow those kinds of contracts.

The merge of Hydro and Statoil define a clear advance in terms of reporting and reinforce of the implementation of the tri sector partnership model of 2001. First the merge allowed that StatoilHydro reporting in agreement with the GRI mechanisms. Secondly the merge increased the workforce of the company and increased the women staff from 20% in 2001 to 37% in 2010, which promote the gender equality and non-discrimination standards inside of the company. However the merge also carried problems with the illegal contracts on Libya in 2007 that affected the reputation of Statoil in addition with the Horton case.

On another hand is evident that the separation of Statoil Fuel & Retail carried many structural changes for Statoil, the most notorious was the decrease of the permanent job positions and the proportion of women in those vacancies, which was reflected in the job satisfaction of the enterprise. However, the improvements in terms of corporate social responsibility, HSE training, grievance mechanism, and anti-corruption policies allowed the company to reach a perfect score in the GRI standards from 2009 to 2013, which were mainly affected by the regulations changes the terrorist attacks of the Algerian facilities in 2013.

It is clear that the most successful mechanism that Statoil used to implement social sustainability, was the creation of positive spin-offs and investments in Norway and host countries which were used to promote development, education, human rights and engage communities into the decision process. On another hand the reply of the tri-sector partnership model of 2001 with other partners allowed Statoil to collaborate with institutions, industries, and civil society organizations to create job opportunities, implement corporate social responsibility and anti-corruption mechanisms. Finally, the major sustainability problems were experienced due to corruption, workforce reduction, and operational fatalities and accidents. But also by external factors such as social conflicts and terrorist attacks in host countries interfered that interfered with the sustainability of the company.

CHAPTER VI: EMBEDDING BUSINESS INTO ENVIRONMENTAL SUSTAINABILITY

We don't have to detriment a strong economy for a healthy environment

Dennis Weaver cited by (Joseph, 2012 p. 98)

6.1 Introduction

The Brundtland commission of 1987 defined the pillars to achieve sustainable development by the new millennium and beyond, one of them was the environmental management and protection. United Nations recognized the importance to implement social, economic, and political regulations to ensure environmental sustainability for the long term involving actors such as nations, enterprises and civil society (United Nations, 1987p. 6). In the specific case of oil and gas companies, the articles 60 and 64 of the WCED claimed the need of energy policies based on energy efficiency and oil prices regulation to develop dialogues between consumers and producers (United Nations, 1987 pp. 16-18). The climate change awareness, water pollution, melting of the arctic and environmental problems increased in the last decades of the XX century developed a new environmental revolution and changes in regulations and targets for nations and industries. In one way the Kyoto Protocol stipulated a commitment period between 2008 to 2012 to decrease the GHG emissions with a limitation of approximately 11 billion tones/year by each of the nations involved (UNFCCC, 2008 pp. 2-6) (Norwegian Ministry of the environment, 2006 p. 12). Norway was and still being one of those countries, and had the commitment to reduce its emissions in 100% by 2050 using internal regulations, Funds for enterprises that adopt Clean Development Mechanism (CDM) into their operations but also through mechanism such as ODA to collaborate with other nations to reduce their emissions (Norwegian Ministry of the environment, 2006 pp. 12-14).

Jafarinejad argues that negative effects of the oil and gas industry over the ecosystem can be experienced in many ways such as toxicity, acid rain, biodiversity, and environmental degradation by oil spills and greenhouses gas emissions with negative effects in climate change (Jafarinejad, 2017). During the last decades, the hydrocarbons industry have had serious problems related to that, the most dramatic was the oil Spill of BP in the Gulf of Mexico in 2010. However, the history of Statoil is not clean in those aspects either, during 2007, near of 27,500 crude barrels were unintentional spill on the sea product of a weakness in the system of the Statfjord A platform in the North Sea and the environmental controversy for the Oil Sands

project in Canada (StatoilHydro, 2007b p. 19). Though, the Norwegian state is recognized for being the climate and environmental aware through strategies focused on climate policies, CO₂ capture, and arctic protection, and the most relevant for this study the “OG21”, which was a strategy generated by the Ministry of Petroleum and Energy to reduce GHG emissions produced by the energy and hydrocarbons sector and improve technological development for environmental sustainability in the Norwegian continental shelf (Norwegian Ministry of the environment, 2006 p. 35).

After the end of commitment period of the Kyoto Protocol in 2012, and the increase of the earth temperature; the global leaders, civil society and scientific community recognized that the global efforts were not enough to stop the negative effects on the climate change and environment, so they launched stronger climate policies and new targets focused in the finances flows towards GHG, adjustment of climate change mitigation strategies by developed nations, and creation of environmentally friendly technology stated in the Paris Agreement of 2015 Articles 2,6 and 10 (United Nations, 2015a pp. 3,7, 14). But Implement an effective climate policy can decline the value of oil and gas reserves, and consequently the welfare of hydrocarbons nations and industries such as Statoil, however, The Official Norwegian Reports NOU 2018:17 claims that this risk can be manageable through the launch of oil and gas price scenarios following the Paris Agreement and of course sustainability (Norges offentlige utredninger, 2018 p.6).

The aim of this chapter is to discuss the research question of *Which were the most remarkable environmental reporting changes experienced by Statoil’s annual and sustainability informs between 2001 to 2015 influenced by the global regulations of the Kyoto Protocol and the Paris agreement?* Through the development of 3 subchapters based on 7 environmental indicators in agreement with the key environmental parameters of the MDGS, GCSAT, CDP and GRI, such as CO₂ and Nitrogen Oxide emissions, Harmful Chemical Discharges (HCD), friendly technology improvements and renewable energy, climate change strategies, energy consumption, and water regulations discussed in a chronological way. The first subchapter, describes the first years of environmental sustainability of the enterprise before the merge with Hydro, answering how was the performance of Statoil in terms of GHG emissions, technological and guidelines improvements in terms of renewable energy, but also the environmental problems that the company had and its effects in the Arctic ecosystem.

On another hand, the subchapter 2 “Environmental sustainability after StatoilHydro throughout the first commitment of Kyoto Protocol 2008-2012” is high orientated to analyze the performance of the enterprise

with technological improvements, partnerships, and projects to reduce GHG, and the fluctuations of the economic stability of the enterprise. Finally the subchapter 3” Winds of change from the Kyoto Protocol to the Paris agreement: an analysis of the climate-energy transition of Statoil 2012-2015” describe the energy transition of the company, its compromises, and its performance in agreement with the CDP and the challenges that the company had ahead.

6.2 Effects of production and expansion on environmental sustainability 2001-2007

The environmental sustainability reporting performance of Statoil suffer significant changes during the period of 2001 to 2007, but also the environmental impact and technological improvements did. Firstly, in terms of reporting, at the beginning of the period, the sustainability report included an abstract about the company global GHG emissions, a general statement of the climate challenges that the company had ahead, their technological improvements, oil spills, energy consumption, waste recovery factor and a series of strategies to reduce the impact of the company in terms of biodiversity, taking the Kyoto protocol as a commitment to follow since their first sustainability report in 2001 (Statoil, 2001b pp. 1-54). However, since 2002 the reporting system starting to include a more complete report in terms of Statoil's strategies to capture carbon and also to limit the GHG emissions and discharges (Statoil, 2002b pp. 24-26). 2004 is characterized for the introduction of measures, result and future actions into Statoil reports, which allowed the company to be more clear about what they achieve in terms of environmental sustainability, such as their contributions of USD 2.5 million to the Community Development Carbon Fund (CDCF), but also the failures of the company such as the fatal accidents in Mongstad (Statoil, 2004a pp. 4, 57). In February 2005 something very important happened globally in terms of environmental sustainability, the implementation of the Kyoto Protocol, that event also influences the way of Statoil reporting, which compromised to include its operations the emission trading system on 2008, controversially after the merge the reporting structure changed and the key sustainability performance data 2008 report briefly mention Kyoto protocol and only as an HSE support (Statoil, 2005a p. 42)(StatoilHydro, 2008b p. 2). Nonetheless, the most significant structure reporting change , was just after the in 2007 when for first time Statoil, in that year StatoilHydro, reported in agreement with the GRI standards and achieved a B score with the Index(StatoilHydro, 2007b p. 41).

Secondly, in terms of water pollution, the performance of Statoil suffered many fluctuations during 2001 to 2007. Heanke and Tornero in their study “chemical contaminants entering the marine environment from sea-based sources: a review with a focus on European seas”, defined 5 main sources of harmful chemical

discharges to the sea, such as accidental spillage, operational discharges, offshore activities, seabed mining, dredging of sediments (Tornero & Hanke, 2016 pp. 2-7). It is appreciable that the activities of the oil and gas industry are related to those sources, though, not only chemicals fall into the sea, oil spills are also one of the most common effects of the industry operations. Their effects on the ecosystem can create serious environmental and health problems, Jafarinejad claims that oil spills can kill primary sea communities and organisms, but also produce chemical toxicity of the water that after a prolonged exposition can kill bigger organisms (Jafarinejad, 2017 pp. 94- 95). Conversely one of the most famous effects of the oil spills with biodiversity is its impregnation on the feathers of sea birds, which is toxic for the animal but also impossibility the movement of its body, and for its composition after the exposition with the cold temperatures decrease the temperature of the bird until its death. For example, one of the most remarkable cases that happened in Norway was during spring 1979 when approximately 20,000 seabirds died for unintentional oil spills in the North of Norway (Barrett, 1979 p. 253). The period of 2001 to 2007 in terms of oil spills by Statoil can be considered stable, with the exception of 2005 when the sea oil spills rose 442 m³ cubic meters (Statoil, 2005a p. cover page).

On another hand in terms of chemicals discharges. It is noticeable that even before the implementation of the sustainability reports in 2001, Statoil had guidelines for the reduction of environmental impact. The first one implemented was the compromise of zero harmful discharges to the sea explained in the “A more focused Statoil “annual report 1999, which compromised the oil and gas industry to eradicate to zero its discharges by 2005 (Statoil, 1999 pp. 38, 41). Unfortunately, Statoil was not able to achieve that goal on time, the analysis of the sustainability reports show that Statoil definitely reduced its discharges of harmful chemicals in 88% from 2001 to 2005, but the company discharges remained in 40 tonnes of chemicals in 2005 and 19 tonnes in 2007 (Statoil, 2005a p. cover page) (StatoilHydro, 2007b p. cover page) (See Table. 5). That situation, exhibited the compromise of the company to achieve its goal in almost 95% during 2007, but in another hand, the risks of exposure of harmful chemicals are more dangerous than the oil spills risks, due to their composition of copper, arsenic, heavy metals, semi volatile organic compounds and octylphenol that can put in very high risk not only the marine bio ecosystem but also the human health (the United States Environmental Protection Agency, 2010 cited by Tornero & Hanke, 2016 p. 3).

Table 5 Oil and Gas production, GHG Emissions, Discharges and Energy consumption 2001-2007

Year/ Indicator	Total Revenue (NOK/Billion)	Oil And Gas Production (bbl/ Day)	Co2 Emissions (Million Tones/ Year)	Nitrogen Oxide Emissions (Million Tones/ Year)	Discharges Of Harmful Chemicals (Tonnes / Year)	Energy Consumption (TWh / Year)
2001	236.336	754900	9.2	0.0295	350	44.2
2002	243.814	748200	8.9	0.0264	410	42.1
2003	249.375	737500	10	0.0299	367	47.1
2004	306.218	712600	9.8	0.0311	167	48.1
2005	393.398	701000	10.3	0.0347	40	50.4
2006	425.166	668000	10	0.0316	15	49.4
2007	522.797	831 000	14.6	0.0494	19	69.8

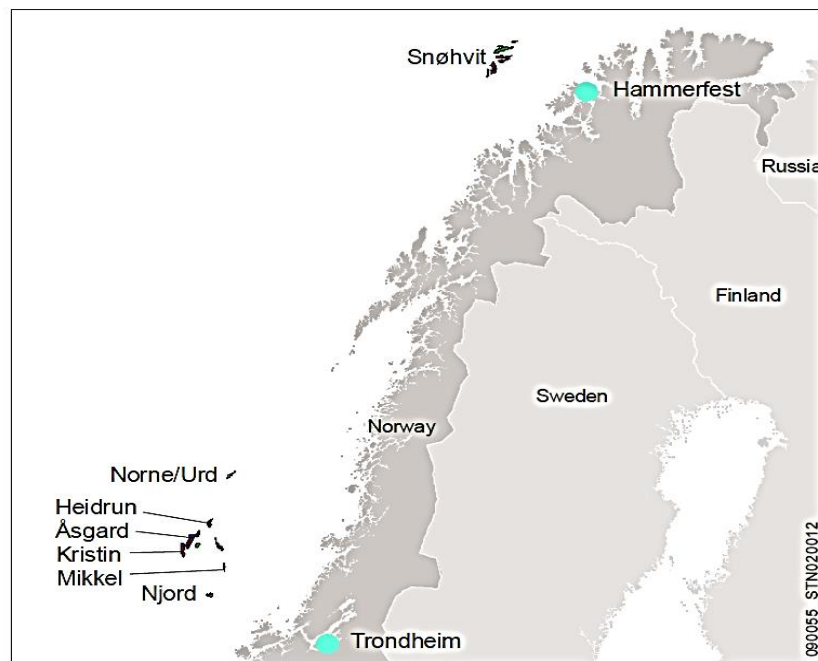
Source: Own elaboration based on Statoil's annual and sustainable reports 2001-2007. Information taken from : (Statoil, 2001b p. 5) (Statoil, 2002b p. cover page) (Statoil, 2003b p. cover page)(Statoil, 2004a p. cover page)(Statoil, 2005a p. cover page)(Statoil, 2006a)(StatoilHydro, 2007b p. cover page)

To overcome those problems, Statoil have used the Environmental Impact Factor (EIF) since the implementation of the sustainability reports in 2001, which was designed to calculate the environmental risk and monitor discharges to the sea (Statoil, 2001b p. 52). However, oil spills are not caused by weakness of the company system always, sometimes they can be caused by extremist attacks too, such as the event on December 2005 in the Niger Delta of Nigeria experienced on the Shell facilities were two contractors were murdered and crude were dropped to the attack (Royal Dutch Shell, 2005 p. 27). Unfortunately Statoil also experienced a similar situation during 2013 in Amenas facility in Algeria were more than 40 people were murdered (See. chapter number 4 subchapter 2) (Statoil, 2013 p. 44).

It is clear that environmental factors are linked to social and political, and to implement stable environmental management is necessary to adapt the practices to the requirements of the place where they are

performed. A very good example of that into the Statoil's history is the case of the Snøhvit project in the Arctic and the Barents Sea. The Snøhvit field was an offshore gas liquefaction plant without surface installations and land operations and pipelines to land from Melkøya, which production started in 2007, but experienced many social, environmental and NGO's pressure and conflicts since it was planned in 2002 (Equinor, 2020c)(StatoilHydro, 2007b p. 12)(Statoil, 2002b p. 31). The sustainability of the Snøhvit project has been proved in all the directions of sustainable development. Firstly in a social land financial approach, Snøhvit was and still located in the north of Norway where Sami communities live and have fishing operations in the Barents Sea, which was affected by the installation of the facility. Secondly, in a cultural way, there are some archeological zones at Melkøya and at Meland that were exposed to risk due to the operations (Statoil, 2002b p. 31) (See Figure. 12).

Figure 12 Snøhvit plant location



Source: Taken from the StatoilHydro annual report on Form 20-F 2008 (StatoilHydro, 2008 p. 37)

Thirdly in the environmental approach, Snøhvit started operations in September 2007 with 6 gas production wells and an average of 1.3 mboe/day during the year; however, the GHG emissions during the start-up were enormous that obliged the plant to shut down for some short periods during the year and regulated those emissions, also the onshore part had some operational problems (StatoilHydro, 2007b p. 18)

(StatoilHydro, 2007a pp. 2, 23, 60). As a result, to overcome those issues, the sustainability strategies implemented by Statoil were, one, Created positive spin-offs for more than 1000 job engagement with the local community with a local share of contracts of NOK 600 million during the construction phase (Statoil, 2002b p. 31) (StatoilHydro, 2007b p. 12 p. 35). Two, generate an environmental study since 1999 to evaluate the risk of operations in the area around of Melkøya and the land and sea extension of the offshore facility (Statoil, 2002b p. 31). Three, to put in balance the impact of GHG emissions of the plant, StatoilHydro implemented carbon injection and storage since spring 2008 with a capacity of 0.7 tonnes of CO₂ captured per year in its early implementation (StatoilHydro, 2008 pp. 6, 79).

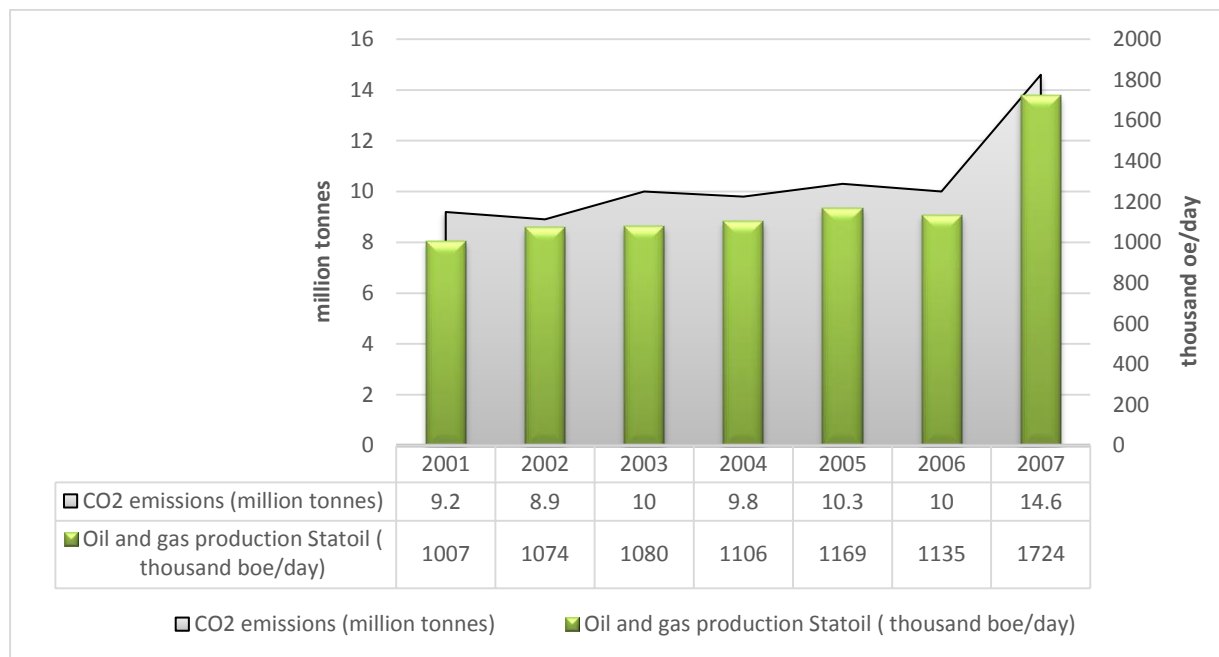
Two of the most important GHG emissions generated by Statoil operations are the Nitrogen Oxide “NO” and Carbon dioxide “CO₂”, which global increase in words of Ann – Kristin Bergquist has been product of the settle of the capitalism system and raise of population worldwide (Bergquist, 2017 p. 5) . The analysis of the sustainability reports from 2001 to 2007 reveal a positive correlation between the oil and gas production by Statoil and its CO₂ and NO emissions, the Table. 5 and Figure. 13 show that the fluctuations over the CO₂ emissions followed almost the same patron as the production, as a result during 2007 when the oil and gas production of StatoilHydro rose 1724 thousand boe/ day the CO₂ emissions produced was 14.6 million tonnes and the NO emissions 0.0494 million tonnes, in comparison during 2001 the oil and gas production was the smallest of the period with 1007 thousand boe/ day, however the lowest CO₂ and NO emissions were registered on 2002 with 8.9 million tonnes emissions and 0.0264 million tonnes emissions respectively (Statoil, 2001b p. 5) (Statoil, 2002b p. cover page) (StatoilHydro, 2007b p. cover page).

Is appreciable in the Figure. 13 and Table. 5 that the biggest increase in GHG emissions was from 2006 to 2007 when the CO₂ emissions increased in almost 40% and the NO emissions in 36% from 0.0316 million tonnes in 2006 to 0.0494 million tonnes in 2007(Statoil, 2006a)(StatoilHydro, 2007b p. cover page). The sustainability report “Going North” of StatoilHydro 2007 did not specify the location of the sources, but clarify that those emissions came from turbines, engines, production wells, drilling, workovers and residual emissions of the Sleipner T treatment platform, though it is clear than the upsurge was due to the increase of production after the merge (Statoil, 2005a p. 42)

In agreement with the research question *Which were the most remarkable environmental reporting changes experienced by Statoil’s annual and sustainability informs between 2001 to 2015 influenced by the global regulations of the Kyoto Protocol and the Paris agreement?* Already has been discussed how Statoil

and StatoilHydro tried to manage their environmental impacts through the reduction of harmful chemical discharges, implementation of carbon capture storage and EIF.

Figure 13 Statoil’s Oil and gas production and its CO2 emissions



Source: Own elaboration based on Statoil’s annual and sustainable reports 2001-2007. Information taken from : (Statoil, 2001b p. 5) (Statoil, 2002b p. cover page) (Statoil, 2003b p. cover page)(Statoil, 2004a p. cover page)(Statoil, 2005a p. cover page)(Statoil, 2006a)(StatoilHydro, 2007b p. cover page)

Nevertheless other remarkable environmental friendly technologies and improvements developed by Statoil during 2001 to 2007 were the creation of Methanol-based fuel cells in cooperation with Northwest Power systems (UK) and Methanex (Canada) to favor the transition of coal and oil markets for others more environmental friendly in 2001, the manufacturing of wood pallets as a renewable energy since 1999, that sold in 2005 nearly 191,000 tonnes in Scandinavia that corresponded to 10% of the worldwide production in the same year (Statoil, 2001b pp. 56,57, 61)(Statoil, 2005a p. 49).

On another hand, Statoil also implemented technologies based on Hydrogen and Marine-Eolic energy. Such as the 46% ownership of the Tidal power energy in Hammerfest that used the tidal currents to convert energy and delivery 300 kilowatts to the Norwegian electricity grid (Statoil, 2003b p. 21). Secondly, the HyNor national development project to reduce GHG through the installation of Hydrogen service stations around the Norwegian highway, specifically Stavanger to Oslo, and help the customers to transcend from

fossil fuel cars to more environmental friendly ones, this project was so successful that in 2006 open its first service station and in 2007 developed a cooperation with Mazda japan to deliver approximately 40 RX cars(StatoilHydro, 2007b p. 17)(Statoil, 2006a p. 33). But without a doubt one of the two of most successful projects of Statoil were the Sleipner and Mongstad carbon capture storage plants. As was explained above Sleipner T also had some residual emissions due to the separation of the gas, however since its implementation in 1996 the platform was able to separate the CO₂ from the natural gas production and keep it 1000 meters underground through a well on the Sleipner A and reduce the content of CO₂ from 9.5% to 2.5% in the natural gas sales for the European market (Statoil, 2005a p. 42)(Statoil, 2006a p. 35). While the Mongstad carbon capture storage was one of the most proficient projects in energy efficiency (Statoil, 2006a p. 36).

6.3 Environmental sustainability after StatoilHydro throughout the first commitment of Kyoto Protocol 2008-2012

Without a doubt, GHG emissions and climate change have been the biggest environmental awareness of the new millennium until nowadays. During the first years of 2000, the United Nations and global environmental concerns were more focused on biodiversity protection, reduce water and forest exploitation and ensure environmental sustainability as the Millennium Development Goal 7 specified. Maybe it was because the CO₂ increased only by 10 % from 1990 to 2000, contrary to the massive 50% increase from 1990 to 2012 with a dramatically upward of 38% since 2000 (United Nations, 2015c pp.7, 53)(United Nations, 2000 p. 6). But also the nations did not implemented the Kyoto Protocol until it was effective in February 2005 with the aim to reduce the GHGs and prevent the dangerous effects of the climate change (UNFCCC, 2008 pp. 12).

The first commitment period of the Kyoto Protocol “2008-2012” made stronger the global environmental regulations for the anthropocentric GHG emissions but also for the oil and gas industries. Which period coincided historically after a very important moment of the history of Statoil, the merge with Hydro in October 2007. As a result, the enterprise had many challenges ahead during its first year as StatoilHydro to maintain its environmental sustainability. In one way the Norwegian government took this situation as one of

its priorities with a commitment to reduce 10% more than the Kyoto Protocol stipulated and decrease the Norwegian anthropocentric emissions in 13-16 million tonnes CO₂ equivalents⁴, which represented almost the same amount than the whole CO₂ emissions of StatoilHydro during 2007 which rose 14.6 million tonnes worldwide (Norwegian Ministry of the environment, 2006 pp. 10-11)(StatoilHydro, 2007b p. cover page). In addition Shell and Statoil followed that commitment and participated on the Halten CO₂ project and OG21 to create technological improvements for use of CO₂ to recover oil (Norwegian Ministry of the environment, 2006 p. 35)

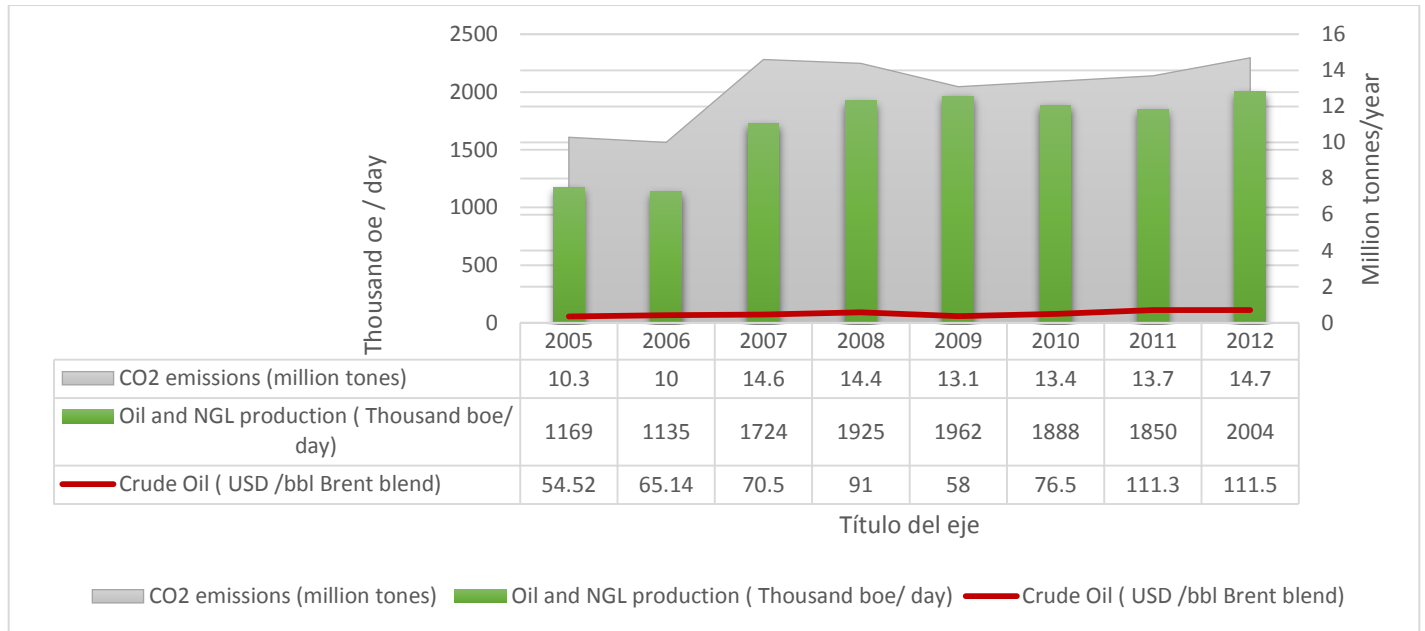
On another hand, implement an effective climate policy that reduce the anthropocentric GHG implies increase of the oil prices, taxes for use of cars that use fossil fuel such as the Norwegian's regulations. The Norwegian Ministry of Environment claimed that if all the countries involved in the Kyoto protocol followed the Norwegian model and included taxes in to the activities that generate GHG, can generate a more responsible consume, but also its represent an increase in the oil prices during the first commitment period , (Norwegian Ministry of the environment, 2006 pp. 20- 34). However, what the Norwegian Ministry of Environment did not expected in 2006, was the economic crisis of 2008 which reduced the oil prices dramatically from 91 USD/ bbl to 58 USD bbl in 2009 (StatoilHydro, 2008 pp. 155)(Statoil, 2009 p. 12).

As was explained in the previous chapters the oil prices depends of the demand, volatility, supply and the OPEC regulations (Gorelick, 2011)(Olimb & Ødegård, 2010). In addition, this thesis found and interesting behavior of the CO₂ emissions and the oil prices, which is strongly correlated to the oil and gas production. The figure. 14 shows that, during the first commitment period the Statoil's CO₂ emissions fluctuated between 13.1 million tonnes in 2009 to 14.7 million tonnes in 2012 while the oil and gas production experienced small fluctuations (Statoil, 2009b p. 56)(Statoil, 2012b p. 3). By contrast, after the economic crisis of 2008, during 2009 the Brent Blend oil prices dropped to their minimum value over the period analyzed with a 58 USD/ bbl price, in comparison the CO₂ emissions experienced the minimum value too with 13.1 million tonnes;

⁴ It is important to clarify that the European Environment Agency define CO₂ tonnes equivalents as a measure to compare the potential of damage from all the emission of GHG that come from different anthropocentric sources in comparison with the same potential damage equivalent by carbon dioxide on climate change and not only by CO₂ gas emissions (Eurostat Statistics explained, 2017).

however the oil and gas production remained stable and even increased in 37 thousand boe/ day during the same year (StatoilHydro, 2008b p.3)(StatoilHydro, 2008a pp. 4, 155)(Statoil, 2009a pp. 5, 157)(Statoil, 2009b p. 56).

Figure 14 Statoil’s Oil and gas production and emissions towards the Brent blend price



Source: Own elaboration based on Statoil’s annual and sustainable reports 2005-2012. Information taken from : (Statoil, 2005a pp. cover page) (Statoil, 2005b pp. 1, 26 , 64) (Statoil, 2006a p. cover page) (Statoil, 2006b pp. 1, 28, 64) (StatoilHydro, 2007b p. cover page) (StatoilHydro, 2007a pp. 2, 87)(StatoilHydro, 2008b p.3)(StatoilHydro, 2008a pp. 4, 155)(Statoil, 2009a pp. 5, 117,157)(Statoil, 2009b p. 56))(Statoil, 2010b p. 25) (Statoil, 2010a pp. 5,164-169)(Statoil, 2011a pp. 5,118)(Statoil, 2011b p. 119)(Statoil, 2012b p.34)(Statoil, 2012a pp. 4, 105)

That behavior suggest that the oil and gas production was one of the main sources of the Statoil’s CO₂ emissions, but also that it was linkage to other operational causes such as the start-up of the Mongstad heat plant, which was the main source of the CO₂ emissions upsurge from 13.1 million tonnes in 2009 to 13.4 million tonnes in 2010 (Statoil, 2010b p. 25) (StatoilHydro, 2008a)(Statoil, 2012a).

Furthermore, if something characterizes the environmental history of the oil and gas industry during this period, it was the environmental problem product of oil spills. The most remarkable, the environmental disaster of the Deepwater Horizon facility of British Petroleum “BP” in the Gulf of Mexico in 2010 , when a ring explosion allowed the spill of massive amount of crude over the sea that destroyed the local biodiversity and altered the composition of the water (Statoil, 2010b p. 58). Barry Bozeman attributes this catastrophe to

technical, organizational, and idiosyncrasy factors (Bozeman, 2011 pp. 244-247). For example, Bozeman claims that the Deepwater horizon exceeded its deep technological capability during operations, the size of the facility was extremely big and required too much maintenance, the materials of the structure had the very bad quality and the pressure tests were not adequate to the requirements of the facility; however, all of also those factors were the result of wrong decision making and bad management by the company (Bozeman, 2011 pp. 244-249). Unfortunately for Statoil, this environmental catastrophe also affected its operations in America through radical regulations such as stop the drilling operations of the gulf for half year (Statoil, 2010b p. 58). It is clear than, Statoil used that external experience to be more aware and increased its HSE regulations and link forces to the Joint industry projects (JIPs) and the International Association of Oil and gas producers (OGP) to share lessons learned and technological improvements to avoid those problems (Statoil, 2010b p. 58). By comparison the unintentional oil spills of StatoilHydro decreased from 219 m³ in 2009 to 52 m³ in 2012 but unfortunately increased to 69 m³ in 2013 (Statoil, 2009b p. 60)(Statoil, 2013 p. 6).

On another hand, the way of reporting after the merge changed significantly. First of all, the structure of the reports followed the GRI standards since 2007 and reported in agreement with them (StatoilHydro, 2007b p. 41). But also the reporting of the harmful chemical discharges changed, it was due that after 2008, its concentration was not reported for the Key sustainability performance data 2008 report or other following reports, leaving unclear is Statoil was able to achieve its compromise to reduce to zero its harmful chemical discharges. It is important to mention that Statoil's goal was to eradicate its HCD in 2005, however, it was not possible and during 2007, those discharges remained in 19 tonnes (StatoilHydro, 2007b p. cover page). On the other hand, the analysis of the reports showed that Statoil reduced its discharges in more than 90% since 2000, and the GRI report 2008 displayed that StatoilHydro fully covers the standard EN22 related to “total water discharge by quality and destination” during that year (StatoilHydro, 2008b p. 24).

Finally, the GRI index qualified this period of the history of Statoil as the most sustainable with a score of A+ from 2009 to 2013. Furthermore , in terms of environmental sustainability Statoil had some reporting lacks during those years in terms of standards EN 7 “initiatives to reduce indirect energy consumption and reductions achieved”, EN10 “ % and total volume of water recycled and reused”, EN17 “ Other relevant indirect GHG emissions by weight”, EN 24 “ Weight of transported, imported hazardous under the terms of the Basel convention”, EN 29 “ significant environmental impacts of transporting products” EN 30” total environmental protection expenditures and investments” (Statoil, 2009b pp. 95-103)(Statoil, 2011b pp. 29-

35)(Statoil, 2012b p. 49)(Statoil, 2013 p. 35).

6.4 Winds of change from the Kyoto Protocol to the Paris agreement: an analysis of the climate- energy transition of Statoil 2012-2015

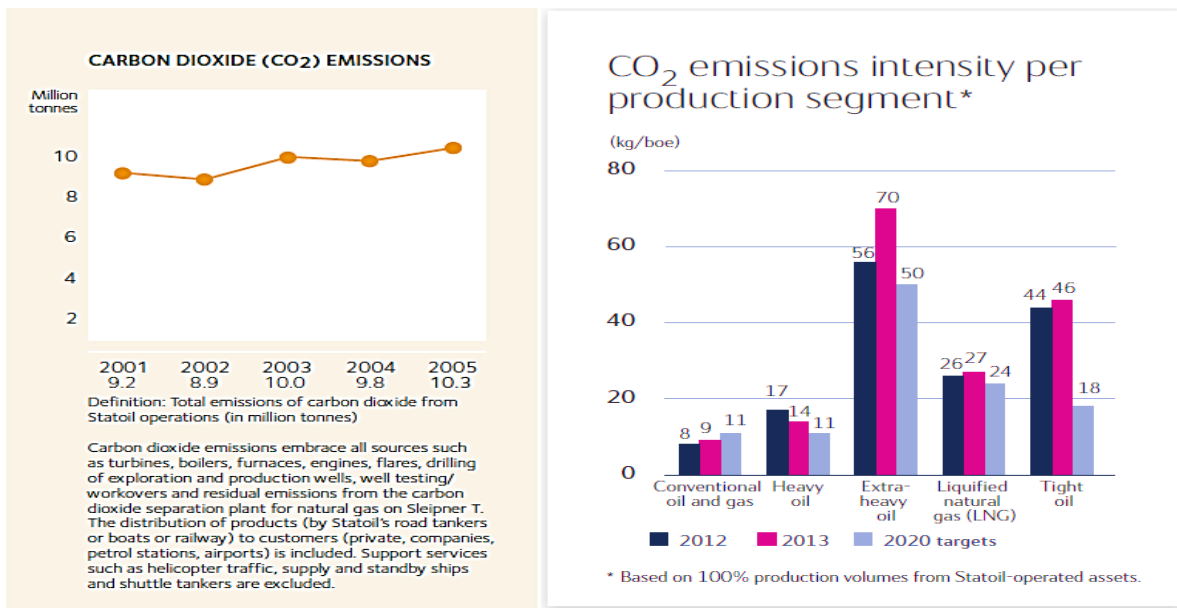
The environmental sustainability history of Statoil during 2012 to 2015 is characterized for a climate change awareness and strengthen on low carbon policies, renewable technology, CO₂ efficiency and HSE (Carbon Disclosure Project, 2013). Unfortunately this period is also characterized for the biggest carbon dioxide and nitrogen oxide emissions of the time studied. Is remarkable than during 2012 and 2013 Statoil achieved a perfect score of sustainability with the GRI 3.1 Index, with some lacks of reporting in terms of energy consumption and other sources of GHG; however, during 2014 the company actualized its reporting to the new form of GRI, the GRI 4, at the same time that the attention of the stakeholders and labor organizations increased for concerns of artic operations and the oil sands field in Canada (Statoil, 2014b pp 7, 22)(Statoil, 2013 p. 35).

Public perceptions also affect the sustainability and reliability of an enterprise, Tvinnereim, Lægreidb, and Fløttum proved in their investigation, that negative environmental reputation of companies can affect its business and sells; in their study, they found that the public exposed to news that included the words crisis or work-life changes had more influence in the decision making than the words fossil-renewable or alternatives to oil (Tvinnereim et al., 2020 pp. 3-6). As a result, even if an enterprise promoted excellent environmentally friendly strategies, a negative public point of view could decrease the reliability and welfare of an enterprise. Statoil was not an exception and had many controversial environmental and public problems for the annex of the Canadian corporation North American Oil sands corporation “NAOSC” in Alberta Canada in 2007, it was due to biodiversity damage and the risk involved in the extraction of oil from tar sands deposits (StatoilHydro, 2007b p. 13)(Greenpeace, 2011)(Statoil, 2016b). Conversely, during it, history with Statoil, oil sands developed job opportunities for the local community and was the biggest energy supplier of Canada with more than 50% of its oil production during 2010. However, the financial and optimization strategy of Statoil decided that the best decision was to sell it to Athabasca Oil Corporation in January 2017 (Statoil, 2010b p. 107)(Statoil, 2014b p. 32).

The period of 2012 to 2015 brought many changes in terms of GHG emissions reporting for Statoil. In one way, the GHG emissions of Statoil increased from 14.7 million tonnes of CO₂ in 2012 to 15.4 million tonnes in 2015, by contrast the emanations of nitrogen oxide oscillated between 0.0452 to 0.0363 million tonnes

from 2012 to 2015 respectively (Statoil, 2012b p. 34) (Statoil, 2015b pp. 18-20). Firstly, the reporting system evolve positively into a more structured report , Since 2010 Statoil approach the climate performance in accordance with HSE strategies presenting some indicators such as oil spills and other spills as part of the safety ,security and responsibility of the company and not inside of its performance at a glance environmental as was before. By contrast the sustainability report 2013 approach climate change as a separated topic and not into the HSE guidelines (Statoil, 2010b p. 50)(Statoil, 2013 p. 8). Secondly, it is noticeable that after 2013 , Statoil also included CO₂ future targets to achieve in 2020, but also the sources of the CO₂ and GHG emissions of the Statoil's operations were reported more clear , for example the figure. 15 shows two graphics of the behavior of the Statoil's carbon emissions, the first one was taken from the sustainability report 2005 when the reporting was more simple, indicating the concentration of the emissions, and briefly mentioned as a note that they come from turbines, boilers and operations, while in another hand the report the sustainability report 2013 indicate how much CO₂ was produced by each production segment in kilograms per barrels of oil equivalent (kg/ boe) (Statoil, 2005a)(Statoil, 2013 p. 11). The figures can look simple, but in terms of reporting represent a big change with a whole engineering work behind, that allow the readers and auditors and specialist to analyze were the emissions come from, in which concentrations and which strategies can be implemented per each segment to reduce those emissions.

Figure 15 Changes in the CO₂ emissions reporting structure



Source: (Statoil, 2005a)(Statoil, 2013 p. 11)

On another hand, since 2012 Statoil reported to the Carbon Disclosure Project benchmark which covered the period of January to December 2011 and presented that the strategies of Statoil were focused on HSE and carbon efficiency, but also that the company was not able to contribute with its target of reducing CO₂ emissions in 800,000 tonnes by 2020, due than the CO₂ emissions increased in 300,000 tonnes during 2011 to 2012 (Statoil, 2012bp. 34)(Statoil, 2011b)(Carbon Disclosure Project, 2012 pp. 1-13). However, the reporting progress of Statoil during this period was faster than in the previous years. Statoil developed better reports in terms of environmental sustainability, and that was visible in the CDP report of 2013 that explained that the company climate and environmental policies was focused on low carbon and renewable technologies, business strategy and investment decisions, CO₂ efficiency and HSE. But also that the company had an strong consents position in agreement with the Center for Environment Policy Studies (CEPs) and the International Emission Trading Association to promote a market base in climate legislation and negotiations (Carbon Disclosure Project, 2013 pp. 1- 9).

On another hand in 2012 United Nations Global compact introduced also its 21 criterion based on the 10 principles of the UNGC, in which criterion number 9 “The COP describes robust commitments, strategies or policies in the area of environmental stewardship” and number 10” The COP describes effective management systems to integrate the environmental principles” Statoil was able to achieve a perfect reporting during almost the whole period of 2012 to 2015. However, during 2015 the criterion number 10 was no fully complete in terms of internal awareness, grievance mechanisms for reporting in concerns of environmental impact (United Nations Global Compact, 2012)(United Nations Global Compact, 2015).

The year of 2015 represents a significant change in terms of sustainable development, but specifically in terms of environmental sustainability that reformed the targets and management of oil and gas industries globally. The convention of the Paris Agreement in December 2015 signed at the UN Conference of Parties (COP 21) encourages the global awareness of climate change recognizing the importance of conservation, protection of biodiversity, education, public participation, and awareness, promote human rights and gender equality through global cooperation as strategies to address climate change (United Nations, 2015a p. 2). It is remarkable than the Paris Agreement rectified the concerns of the UNCHE 1972, which one proclaimed than environmental problems were related to social inequalities, political conflicts, and lack of economic growth (United Nations, 1972 pp. 1-5)(Statoil, 2015b p. 4). However, the Paris Agreement visualize the problems as

the key point of actions to stop the effects of the climate change, recognized that developed countries are the major causes of GHG emissions but also that developing countries need to contribute through limitation targets (United Nations, 2015a p. 4). As a result, Statoil objectives also transformed, if reduction of GHG emissions and technological improvements were the priorities of Statoil after the first commitment period of the Kyoto protocol, address the Paris Agreement and the Agenda 2030 became one of the priorities of the company's stakeholders which were settled by the board of directors in their annual general meetings (Statoil, 2015b p. 4).

The Agenda 2030 for Sustainable Development replaced the United Nations Millennium declaration in 2015, and the 8 MDGs were substituted by new and better-structured goals the 17 SDGs (Regjereingen, 2020) (United Nations, 2017 p. 2). The Norwegian Ministry of Foreign Affairs took special considerations to address seven of them by 2030, the objectives 3 "Good health and quality of life", 4 "Good education", 6 "Clean water", 7 "Ensure access to affordable energy for all", 13 "take urgent action to combat climate change", 14 "conserve and sustainably use the oceans" and 15 "Land life protection", however, the particularity of those key objectives is then the oil and gas industry had direct and indirect effects in all of them (Regjereingen, 2020) (United Nations, 2017 p. 2- 10). In response of the objectives 13 and 7, Statoil compromised to follow the Paris agreement of the COP 21 and implement an effective climate arrangement to contribute with the target of global reduction of the total GHG emissions by 2050 in 60%, as a result, Statoil compromised to reduce its emissions in 800,000 tonnes by 2020 but also to continue implementing more affordable energy such as the product from the Sheringham Shoal Offshore wind farm that produced 317 MW Mega Watts in 2014 and can substitute the use of fossil fuels in the UK and reduce the CO2 emissions in 9.7 million tonnes over a period of 20 years (Carbon Disclosure Project, 2015 pp. 2-14) (Statoil, 2015b p. 2).

Furthermore, the Carbon Disclosure Report 2016 claims that Statoil business strategy has been influenced by climate change in many aspects, such as cost reduction, low carbon technologies, CO2 emissions and oil, and gas production regulations but also by zero production flaring 2030, reduction of methane and carbon pricing (Carbon Disclosure Project, 2016 p. 8). The last one is very remarkable because Statoil, British Petroleum, Shell and Total in collaboration with nations and business discussed in June 2015 an adaptation of carbon prices in the global markets to regulate the global emission of those companies but also the markets (Statoil, 2015b p. 11).

Finally is clear that the period of 2012 to 2015 represented the major guidelines and policies changes in

terms of environmental sustainability for Statoil, the company reported more specific in agreement with the Carbon disclosure project, taking carbon prices and low carbon emissions as the company's priorities, the oil spills changed its reporting and became part of the HSE security measures which in 2015 demonstrated an interesting decrease from 125 m³ of oil spills from 2014 to its reduction of 23 m³ in 2014 that represent a reduction of 90% of the amount reported in 2001 (Statoil, 2015b p. 26)(Statoil, 2001b p. 5). Contradictory as was expressed above the CO₂ emissions also increased as the compromises of reduction of the company did. However, the enterprise also had an impressive evolve in renewable energy production that increased from 86 Gigawatts (GWh) in 2010 to 300 GWh in 2012 and 475GWh in 2015, with a special performance in the renewable energy projects of the Sheringham Shoal and Hywind Demo (Statoil, 2015b pp. 21, 41). But also the carbon capture and storage projects of Sleipner and Snøhvit which total volume of carbon accumulated rose 19.5 million tonnes in 2015(Statoil, 2015b p. 22).

6.5 Conclusions

The environmental reporting performance of Statoil experienced several changes trough its history. First of all the analysis of the sustainability and annual reports disclosed than the priorities and guidelines of the company in terms of biodiversity, climate change and environmental degradation evolved in agreement with the historical periods of the United Nations environmental regulations. While the technological and renewable improvements also evolve to satisfy the requirements of the global market that was also influenced by the Millennium Development Declaration, Kyoto Protocol, COP 21 and Agenda 2030.

Consequently, the period of 2001 to 2007 reported the lowest GHG emissions, which increased after the merge that also increased the oil and gas production after 2007. However, the sustainability reporting during those years was very simple and with many lacks of structure. For example, Statoil did not report to the GRI index until its merges with Hydro in 2007 and before that year, the climate, biodiversity and water pollution sections of the reports were limited to show the concentrations of oil spills, HCD, GHG emissions, energy consumption and their strategies to mitigate them through its operations. On another hand the implementation of the Kyoto Protocol in 2005 did not transform the guidelines of Statoil immediately, those were better implemented after the merge with Hydro in 2007 and specifically in 2009. In terms of technological and renewable improvements, the efforts of the company were mainly focused on the sale of Biofuels, HyNor service stations, and the carbon capture storage at Sleipner and Snøhvit. Unfortunately what is also noticeable is that Statoil reduced its HCD in almost 90% at the end of this period, but was not able to achieve its target

of zero HCD in 2005.

On another hand, the first commitment period of the Kyoto Protocol and the merge of Statoil with Hydro revolutionized the reporting system of the company, first of all with the reporting to the GRI standards and secondly to adequate its emissions policies in agreement with the Norwegian environmental regulations of that age. By contrast, the oil and gas production increased considerably from 2008 to 2012 and the oil prices fluctuated as a result of the economic crisis of 2008, which affect the Blend Brent prices but not the production of Statoil and also its GHG emissions. Also, this period was characterized by the controversy over the Deep Horizon environmental crisis caused in the Gulf of Mexico and affected the global public point of view of the oil enterprises, which was reflected in the operations of Statoil in oil sands Canada.

Furthermore, the changes experienced during the first commitment period were reflected in the Statoil guidelines since the beginning of 2012, when Statoil reported for the first time to the Carbon disclosure project but also revolutionized its targets and policies in agreement with the global requirements to reduce carbon dioxide emissions. As a result, the policies of the enterprise were more focused on carbon prices, partnerships, carbon capture, climate scenarios, HSE, and CO2 efficiency.

Finally, the implementation of the Sustainable Development Goals and the Paris agreement in 2015 settled a new environmental sustainability scenario for Statoil, which in its sustainability report 2015, the enterprise showed compromised to follow. But still had many challenges ahead due to the visible increase in its GHG emissions. Nonetheless, in terms of reporting the environmental sustainability of Statoil achieved a very good performance approaching the pillars of sustainable development into its guidelines.

CHAPTER VII: CONCLUSIONS

This study has aimed to formulate a historical analysis of how the Statoil's sustainability and annual reports evolved and inserted the sustainable development pillars into their guidelines and sustainability reporting system from 2001 to 2015. Adopting a micro, macro, and meta-perspective of how the merger with Hydro in 2007 and the separation of Statoil Fuel & Retail in 2010 transformed the sustainability priorities and guidelines of the company.

Subchapters 4.2 "Norway, Statoil and the overcome of Paradox of plenty" 4.3 "From Statoil to StatoilHydro an analysis of business expansion and operations 2001-2007", 5.2 "Building a reputation, human rights and corporate responsibility 2001-2007" and 6.2 "Effects of production and expansion on environmental sustainability 2001-2007" analyzed how was the reporting performance of the company before the merger in 2007 and found correlations between the social, political, economic and environmental indicators that was strongly influenced by the historical moments relevant to that period.

The sustainability reporting system of the annual and sustainability reports before the merge was characterized for being simple, direct but without a structured benchmarking system to follow. Since 2001 Statoil included sustainability from the different perspectives of the pillars of sustainable development, including economic growth, production, environmental impact, human rights approach, job satisfaction, number of employees, the proportion of women into the staff, using direct numbers, and percentages. However understand how the reports addressing human and labor rights, responsibility, and environmental mitigation did not follow a structure, the information was there, but not directly explained. Consequently, It is clear than after the implementation of the UNGC principles in 2003 in agreement with the communication on the progress of the UNGC, and the application of the GRI standards, even than Statoil did not report in accordance with the benchmark until 2007 but yes following the main element since 2002, allowed the company to get a better reporting system.

The subchapter "Norway, Statoil and the overcome of Paradox of plenty" exposed how much important was the participation of the state as a supervisor and shareholder for the consolidation of Statoil during its first years and how that affects the sustainability of the company, which also delimited the major differences between the operation of Statoil in Norway and abroad. Furthermore, the trend of the international

Statoil's business and operations from 2001 to 2007 was the expansion. As a result, Statoil was able to increase its business and operations from 25 countries “ Norway, Denmark, UK, Ireland, Belgium, France, Sweden, Estonia, Latvia, Lithuania, Russia, Poland, Germany, Azerbaijan, Turkey, Iran, Saudi Arabia, Nigeria, Angola, China, Singapore, USA, Mexico, Venezuela and Brazil” in 2001 to 40 during 2007 with the expansion to Indonesia, Cuba, Canada, Morocco, India, Tanzania, Mozambique, Libya, Egypt, United Arab Emirates, Qatar, Georgia, Kazakhstan, Algeria, and the Faroe Islands. Controversially, it was exactly in some of those new countries of operations where Statoil experienced problems in terms of terrorist attacks, environmental controversy, and corruption that affected the sustainability report of the enterprise specifically after the merger.

One of the most relevant correlations found was the socio-economic and environmental controversy that the Statoil's operations experienced in Canada. In one way the acquisition of the NAOCS in 2007 increased the production of StatoilHydro, which allowed the company to create more job opportunities, however, the discrepancy behind the oil tars and the environmental degradation of the zone, in addition with the public point of view, affected directly the social sustainability reporting and the reputation of the enterprise in terms of corporate social responsibility, biodiversity protection, and stakeholders decision making.

Subchapters 4.4” Merging sustainability and business towards economic fluctuations 2007-2015”, 5.3” Join forces to ensure human rights towards corruption risks 2007-2015”, 6.3” Environmental sustainability after StatoilHydro throughout the first commitment of Kyoto Protocol 2008-2012” and 6.4” Winds of change from the Kyoto Protocol to the Paris Agreement: an analysis of the climate-energy transition of Statoil 2012-2015” concluded that the merger between Hydro and Statoil drove positively the sustainability of the enterprise, which achieved the best result from 2009 to 2013 into the GRI index with a perfect score of A+.

The period after the fusion is characterized by an oil and gas production increase that allowed StatoilHydro to be the most important hydrocarbon enterprise of Norway, the first years are defined for important economic growth, but also for an upward trend of the GHG emissions. While the period between the first commitments of the Kyoto protocol between 2008 to 2012 is differentiated by a period of challenges and environmental reporting changes. First of all, enterprise sustainability had to overcome the economic crisis of 2008, which got struggles on the revenue and effective tax indicators in 2009. However, the business strategy allowed the company to raise and get the best profits in 2012. While on the other hand, the separation of Statoil Fuel & Retail in 2010 did not represent big economic problems for the company but yes by

sustainability reporting and labor standards. Without doubt the terrorist attacks experienced in Algeria in 2013 and the corruption cases of Horton case in 2002 and the illegal contracts of 2007 affected the reputation of Statoil during the whole period analyzed, however, those also motivated the enterprise to generate new sustainability mechanisms in terms of non- corruption and HSE training .

Moreover, taking into consideration the theoretical deliberations of Szumilas & Stensaker is clear than the differences of interests between Canadian and Norwegian also favored the separation of Statoil& Fuel and retail in 2010 and finally the split of the reporting in 2012. Even that Statoil was the main shareholder of Statoil Fuel & Retail, the separation of both companies created many reporting problems, in terms of workforce and total revenue. But specifically affected the social sustainability because the split brought a diminution of 6% of the women representation into the Statoil staff after 2010, and a trend of decrease of the non-Norwegians permanent employees into the firm. After all, this last statement was also related to the stop of operations in Iran, Morocco, and Jordan. As a result, the separation of Statoil Fuel & Retail affected the structure and reporting system of Statoil but also favored the enterprise to create new mechanism of reporting, training, and grievance.

On the other hand, the analysis of the external factors such as the oil crisis of 2004, the economic crisis of 2008 and the terrorist attacks experienced in 2013 into a historical comparison with the Statoil performance showing that Statoil managed correctly it business and overcome the oil production reduction of 2004 without a crisis. The trend of Statoil oil and gas production experienced many fluctuations during the whole period analyzed, is evident that the merger with hydro allowed the enterprise to increase dramatically the total revenue and production of the enterprise but also the GHG emissions. Furthermore, 2012 was the year with better economical results with the best total revenue of NOK 723. 40 Billion, and a oil and gas production of 2004 thousand boe/ year. By contrast, this research found that 2003 was one of the hardest years for Statoil with a very small effective tax rate of 62 % and a short increase of the oil and gas production in 6 thousand boe/year in comparison with the year before (Statoil, 2003 p. 70).

Also, the environmental sustainability analysis reveals, that after the implementation of the CDP benchmarking system into the Statoil operations and guidelines, the annual and sustainable reports suffer a whole transformation in structure terms, showing better and more specified targets and sources of emissions. Contradictory, the GHG emissions continued to increase from 2012 to 2015 while the oil and gas production increased too, but the total revenue decreased dramatically from NOK 723.4 billion in 2012 to NOK 482.

800 Billion in 2015 (Statoil, 2012a p. cover page)(Statoil, 2016 p. cover page) However, the decrease in profits of the enterprise did not stop its compromise to contribute with the Paris Agreement and SDGs. Which compromised was reflected with the low carbon policies, renewable technology, CO2 efficiency, and HSE. But also through partnerships and agreements such as the arrangement between BP, Shell, and Total to regulate the carbon prices and reduce the CO2 emissions (Statoil, 2015b p. 11).

Finally, it is possible to conclude that even all the external historical factors that put in challenges the sustainability of Statoil, its struggles with corruption, increase of GHG emissions, and harmful chemical discharges. The company found a way to ensure its sustainability through human capital investments, technological improvements, renewable energy, low carbon policies, key business, and partnerships.

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